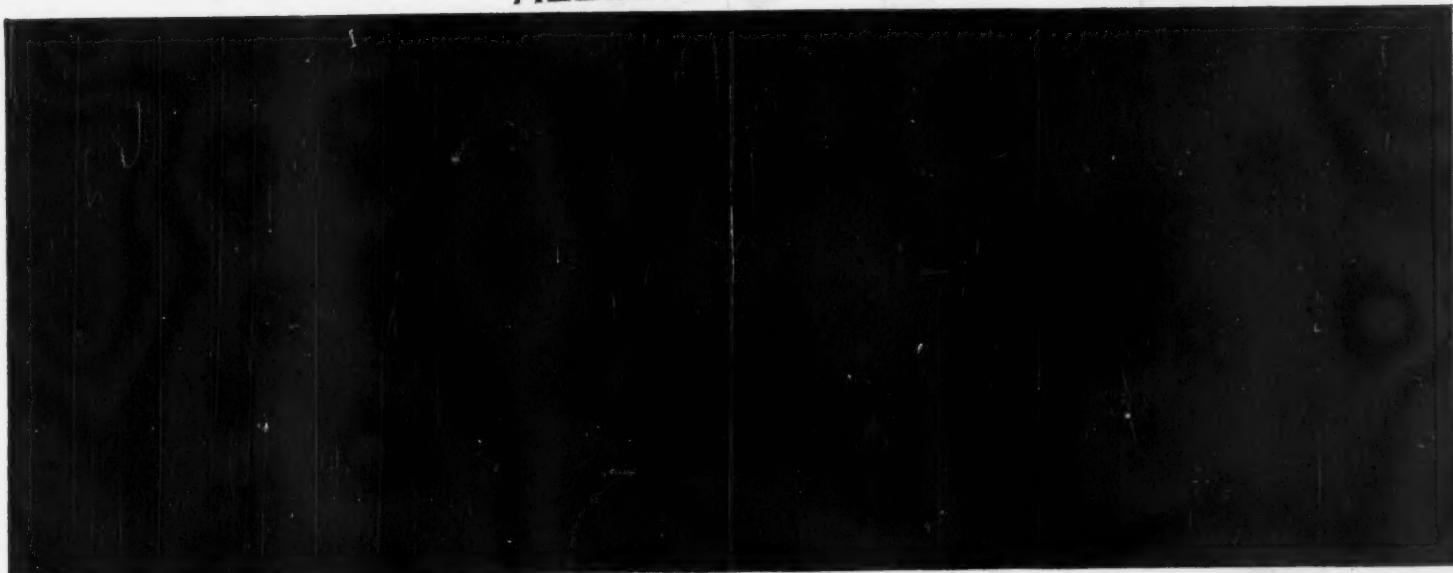


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JACK LIPPERT, Editor

The editor will be glad to consider any manuscripts and photographs submitted to him for publication, if accompanied by stamped addressed envelope for return, if unsuitable.

## The Japanese swimming stroke

EVER since the great success of the Japanese swimming team in the Olympics last summer, there has been a great deal of interest in, and much conjecture about, the Japanese swimming stroke, organization, administration and every phase of the picture that might explain their phenomenal showing. The editor of Scholastic Coach has asked me to comment briefly on their stroke, their success and their use of oxygen before the races at Los Angeles.

To go back several hundred years, the Japanese have always been very much interested in swimming as a necessity in the art of war, as well as in every-day life, because they are entirely surrounded by water and have many inland lakes and streams. Physically, they are well adapted because of their long and strong trunks and their short, yet very flexible arms and legs. The shortness of their arms and legs makes easy levers to handle and therefore the recovery of the arms is a very quick movement which results in tremendous power. The flexibility enables them to get the highest efficiency in the use of these levers and propellers. Before one arm is more than half way through the stroke the other has entered the water and has started its pull; and the legs, being short, require less energy in propulsion, but be-

cause of this flexibility, give as much, if not more, power.

Racially, the Japanese are much stronger in their legs because they sit on the floor with their legs under them, and in sitting down and getting up from this low position all the muscles of the pelvic girdle, as well as the entire leg, are greatly strengthened. This, coupled with possibly a simpler mode of living, would also account for looser and stronger legs.

Their beginnings in the modern crawl stroke go back only as far as 1920 when they first attended the Olympic Games at Antwerp. Since that time their progress has been steadily upward.

Some criticism has been made on their use of oxygen at Los Angeles. This action was merely part of a general program of experimentation in the physiology of exercise that has been conducted for some time by the Japanese. It is simply in line with a great deal of experimental work that has been done and is being done by leading physiologists the world over. Sport is a fertile field for such studies and here again the Japanese Swimming Federation is to be commended for its interest and open-mindedness in advancing the knowledge of swimming.

ROBERT J. H. KIPHUTH  
Coach, American Olympic Swimming Team;  
Yale University Swimming Team.

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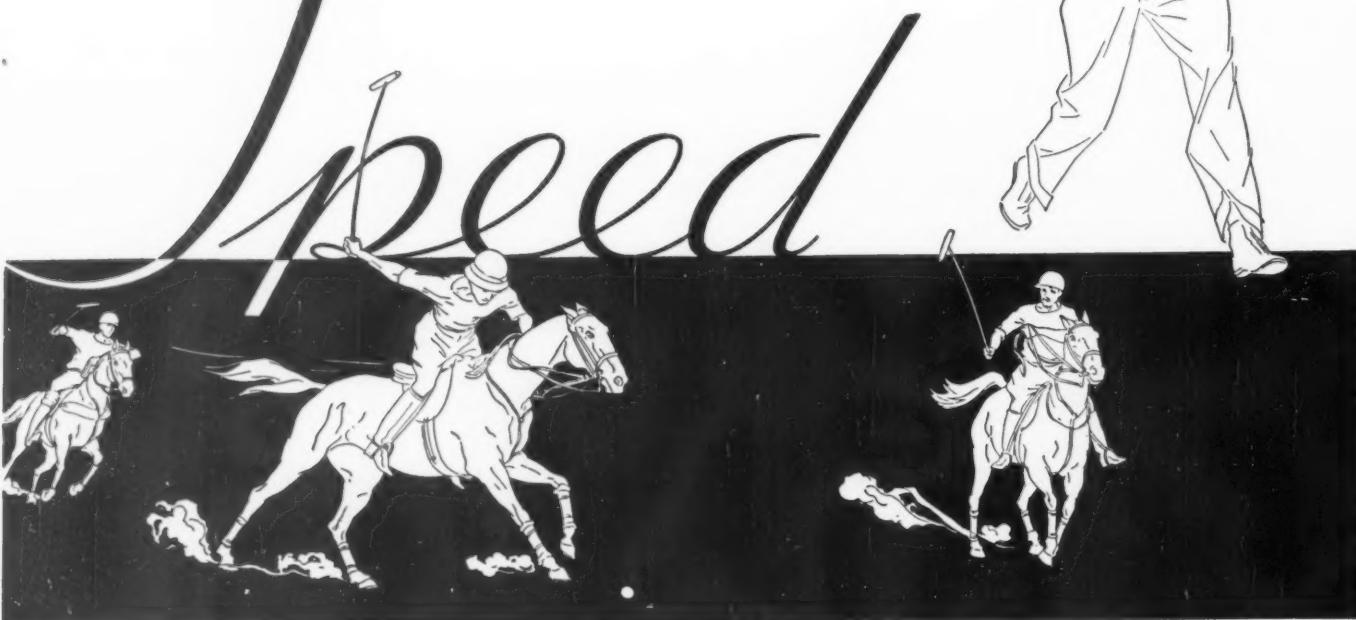
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**T H E C H O I C E O F C H A M P I O N S**

# EDITORIAL

**T**HROUGH the courtesy of the United States Government, we are presenting in this issue excerpts from Monograph No. 27 of the National Survey of Secondary Education, a study entitled *Intramural and Interscholastic Athletics*. You can thank your Government for a most timely and valuable contribution to high school athletics; for an illumination that permits you to examine the national high school athletic picture in a flood of light to which it has never before been exposed. The price of this excellent view is only ten cents, one dime.

To those hapless victims of rugged individualism whose "educational" salaries, if any, are at ridiculous new lows, we apologize for seeming to treat lightly the value of the smallest silver coin.

In connection with the chapter *Problems Arising in Administering Interscholastic Athletics*, the study lists twenty-eight problems which high schools find more or less troublesome. We have reprinted the list on page 39 of this issue. There you will find the gamut through which you may have to run, in part, yourself, if you have not already been through the whole of it.

Professor Brammell, the author of the monograph, remarks that each of the problems could provoke a full-sized discussion by itself. "Such discussions are here out of the question," he writes. "However, so much evidence concerning two of them was acquired during visitation that the presentation of some of these materials is felt to be justified and desirable. These two problems are: No. 15—Physical hazards to contestants; No. 18—Inducements to high school athletes offered by private individuals, alumni, business men, or other persons interested in certain higher institutions."

As you may have noticed, Problems No. 15 and No. 18 are at opposite poles, as far as solutions go. Problem No. 15 offers something to work with. It is the Pure Physical Problem, as opposed to No. 18, the Impure Ethical Problem. No. 15 has its known quantities. The physical hazards to which an athlete is exposed are familiar to all. The best of protection against them can usually be obtained. When the protection has not sufficed, the best remedies of medical science are at hand. Some schools have even gone still further toward a satisfactory solution of Problem No. 15 by introducing financial protection in the form of athletic accident insurance.\*

But Problem No. 18 is not so easily detected as a broken collar bone, and when

it is seen there often is no cure for it. And, what is worse, not every school administrator and coach regards it as a problem at all. Some school men are so much like the pennant-waving college alumni, that they regard it as a sign of successful school management and good education when some of their leading athletes have been the recipients of offers from various colleges. "The boys are poor and they would not have the privilege of a college education otherwise," is typical of the rationalizing indulged in. Unfortunately such rationalizing does not cover the poor second-string benchwarmer, who, while possessing no more worldly goods than the "induced" star, is still perhaps his intellectual equal.

Have you a little list of problems on your desk? If so, your humble editor would like to see them. All confidence kept, we assure you.

## We hope to recover

**S**CHOLASTIC COACH and Scholastic, the national weekly high school student and classroom magazine, are operating under the full provisions of the Periodical Publishers Institute code, as submitted to the National Recovery Administration. We are whole-heartedly supporting the Government in its admirable effort towards a more equitable distribution

of the wealth of our country and the fairer basis for competition in business that it brings. It is gratifying to those who have to do with sports and games to see that at last the merciless competition under which business and industry had struggled is now to be subjected to special sets of rules and codes of ethics. That Utopia where people all act in a responsible manner toward one another would be a beautiful world in which to live, but it does not happen to be the world we live in. It is perfectly clear that laws and codes and governmental regulation are necessary if work and a decent standard of living are to be made available for everybody.

The Depression has brought many a blessing with its misery. Had it not been for the Depression we might never have had a courageous Roosevelt as President, and we would have gone on in the old way of making the rich richer and the poor more numerous.

These are great times for youth and the youthful spirit. It is to be hoped that one other blessing of the New Deal will be to make our youth more politically and socially conscious. Coaches can be of incalculable service in this respect by being themselves conversant with the trend of national and world affairs, and ready to lead conversation that way at every opportunity.

\*Pioneer in this field is the Wisconsin Interscholastic Athletic Association, which finances its own athletic accident insurance. Other state associations, notably Indiana, Iowa and Ohio, have made arrangements with insurance companies to carry the risk. Also, individual high schools in various parts of the country have been buying protection direct from insurance companies. This is usually paid for by the parent of the insured, acting under the advice of the school.

**TO THE LEFT: THE ROLL BLOCK.**  
AS DEMONSTRATED HERE BY  
COLUMBIA UNIVERSITY PLAYERS.  
IT IS LOW AND FORCEFUL, WITH  
THE CONTACT PRESSURE CARRIED  
THROUGH BY THE TURNING OF  
THE BLOCKER'S BODY AFTER  
CONTACT. IT IS ALMOST THE  
PERFECT EXAMPLE OF LEGALITY  
IN A BLOCK THAT CAN SO EASILY  
BECOME ILLEGAL — "FLYING."  
THESE MOVING PICTURES BY  
OWEN REED OF SCHOLASTIC  
COACH.



## THE NEW WILSON ALL RUBBER VALVE IS A GREAT FACTOR IN THE FINE PERFORMANCE OF WILSON BASKETBALLS . . .

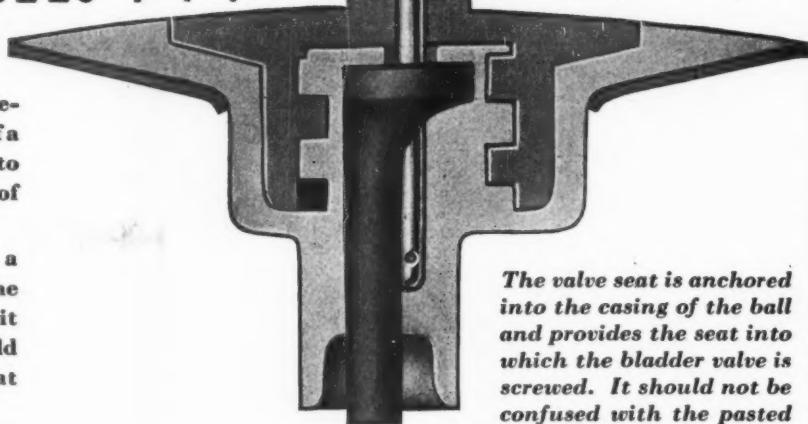
It is the only all rubber valve bladder that is detachable, replaceable and interchangeable. Of a simple all rubber construction with nothing to get out of order — it is leak-proof, dust-proof and fool-proof.

Like the familiar Wilson metal valve, it is a screw-type design that makes removal of the bladder as simple as a twist of the wrist yet it will not work loose inside the ball. It should not be confused with other rubber valves that are cemented or pasted to the casing.

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It is a tried and proven forward step in inflated ball construction and is available on all Wilson inflated equipment.

*The inflation needle passes between the expansion plug and the channel wall of the valve without any danger of bladder puncture. When the needle is withdrawn the expansion plug made of special, elastic, long wearing rubber closes and seals the channel eliminating the use of a dust cap.*



*The valve seat is anchored into the casing of the ball and provides the seat into which the bladder valve is screwed. It should not be confused with the pasted or cemented type.*

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# FUNDAMENTAL BLOCKS

By OLAN G. RUBLE

Mr. Ruble is coach of football at Forest City, Iowa, High School.

**B**LOCKING is the key to the offensive strength of any great team. It is to the offense what tackling is to the defense.

All blocking is a variation\* of two fundamental blocks, the shoulder block and the cross-body block. However, the variations are so distinct in technique and purpose that a number of these must be considered as fundamental to provide adequate tools for the offensive man to meet all the defensive tactics of his opponents. The defensive man may have to be driven out of the ball carrier's path, or he may only have to be held in position. When it is necessary to drive out an opponent, a great deal of leg drive and aggressiveness is required, but if the opponent must only be prevented from getting to the runner's path, the block is a receptive type and depends chiefly upon balance and judgment. The blocks mentioned in this article meet the necessary requirements of the offensive blocker.

Three things are essential to the execution of any block: (1) a movement to get leverage on the side of the opponent by which the play is going, (2) quick contact, and (3) a follow through sufficiently long to prevent the opponent from stopping the play; that is, a player should charge through a man rather than merely at him.

## Shoulder block

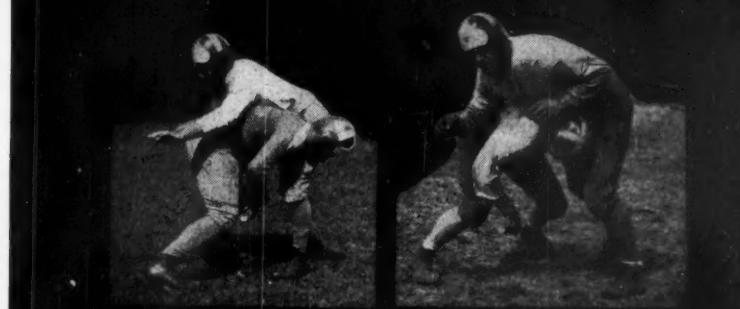
7

The shoulder block is the most frequently used block of all. Some men use it almost entirely, although it is not the best for many circumstances. For a single man it is most valuable when used at short range or against a man who is standing still, because he presents a better target.

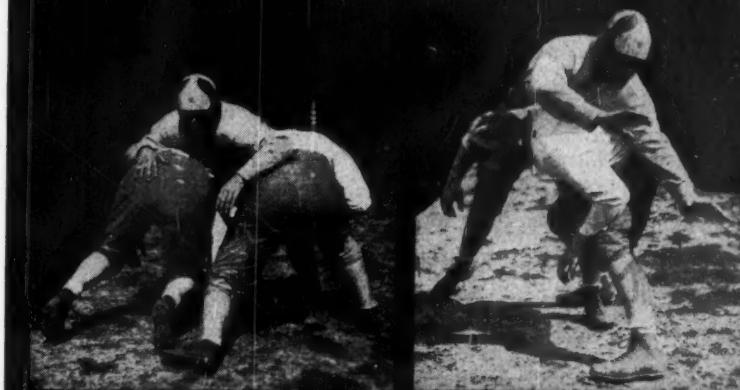
It may be effectively used by a center, guard, or tackle against an opposing lineman; by an end against a tackle; by a backfield man or an interfering lineman against an end; and in the open field against a man who is not moving. (The point of contact is too narrow to make it reliable against a moving man.)

\*The terminology for each variation varies. Some other variations and terms are: Side and Hip Block, Side-body Block, Side-body Block with Indian Roll, Diving Block, Knee Clip, Knee Hook, Knee Hook and Side Pinch (approaches illegally), Smothering Block (two men), Shuffle Block, Crab Block, Bother Block, Standstill Block, Standup Block.

1 and 2



3 and 4



5 and 6



Owen Reed—Scholastic Coach photos.

1 and 2—SHOULDER BLOCK and SIDE SHOULDER BLOCK.

3 and 4—DOUBLE SHOULDER BLOCK and CHECK BLOCK.

5 and 6—CROSS-BODY BLOCKS.

7—INDIAN BLOCK (HANDS FIRM ON GROUND).

Following a dip to avoid the opponent's hands the blocker should have his outside foot (the one away from opponent) advanced as he makes contact in a crouched position with his inside shoulder. He then initiates the force with this outside foot and continues by short choppy steps to drive

upward and away from the play. The effectiveness of the block depends upon beating the opponent to the charge and continuing the drive until he is unquestionably out of the play. If the blocker loses contact, he must fall into a cross-body, roll, or knee block as the conditions call for.

### Side shoulder block

The side shoulder block differs from the ordinary shoulder block only in purpose and manner of contact. It is principally a surprise block in which the blocker drives into the defensive man from the side as he is charging forward. The head is placed in front of opponent, and the force is delivered with the inside shoulder. He can usually be driven a great distance to the side.

An end may frequently use this block against a tackle who is charging in fast on the inside. As the tackle drives in, the end should pivot back with his inside foot and then charge toward the center. Any lineman may be thus blocked out of a play when the offensive man is stationed at the side.

Backs may well use it on any man coming in to block a punt, and it may be effectively used in the open field against any man moving in a path somewhat perpendicular to the blocker. However, when the defensive man is expecting the block, a body block is preferable.

### Double shoulder block

As the name implies, the double shoulder block is a combination of two men, each using the shoulder block against one defensive man. It may be used either in close line play or in the open field. The timing is more difficult, however, in the open field. With this block two men should always be able to handle one man of equal ability.

The offensive men must charge and

get contact together. The inside shoulders must be tight or the defensive man will be able to spread the blockers and get through. When applied effectively the force of the blockers will throw the weight of their opponent on the back of their shoulders where he may be carried for a great distance away from the play.

### Check block

Many times a defensive man is in a position where he is not very dangerous, and it is only necessary to make him take a longer route to prevent him from hindering a play. The blocker must first get his position on the side of the man by which the play is going. Contact is then made with the side of the shoulder and upper part of the body, allowing the opponent to go by only on the outside. The blocker holds his position long enough to make certain that the play has started and then goes on to block someone in the secondary.

This block may also be used by a lineman merely to hold a man in place until a team-mate is able to get into position to block him. The purpose, of course, for doing this is to permit the man in the most advantageous position to go through and lead the interference.

### Indian block

The Indian block is used primarily to protect for passes or punts. By its use the blocker may deflect the course of his opponent, or he may completely take him out of the way, depending on the efficiency of the blocking. Usually the former is adequate.

A lineman may use the block against a man rushing through the line at some point to the side by pivoting back from his offensive position and then driving towards his opponent. Contact is made with the side of the body in the front of and between the opponent's knees and waist. As contact is made the blocker rolls toward his opponent. Care must be taken not to charge too far ahead and allow the defensive man to go on the inside and therefore have a shorter route to the spot of the pass or punt.

A backfield man commonly uses this block when he must prevent an end or tackle from rushing in. He uses the same method as a lineman except that he should wait momentarily to allow the defensive man time to show the direction of his charge.

### Cross-body block

When an opponent must be only held in position or prevented from

[Continued on Page 30]



8 and 9



10 and 11



12 and 13

# SUGAR IN ATHLETICS

Scholastic Coach has the honor to present the first of a series of seven articles on diet in relation to energy in athletics by Dr. Peter V. Karpovich of Springfield College. At Springfield, where he is professor of physiology, Dr. Karpovich has the resources of a world famous school of physical education at his command. His experiments there benefit by the special understanding that can be given them by men who are making physical education and coaching their life profession.

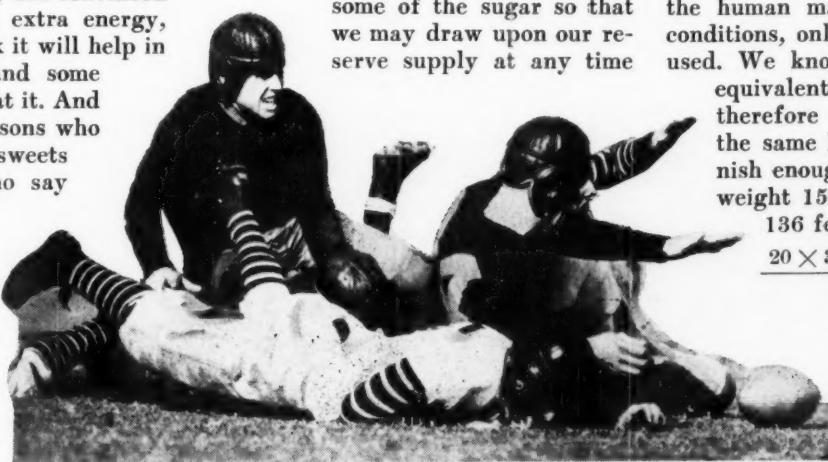
**A** DISCOVERY that sugar is a fuel for the muscles and furnishes the energy necessary for muscular contraction, naturally led to an attempt to use sugar as a source of extra energy for competitive sports. Some eat it because they are convinced that it will give them extra energy, some because they think it will help in some unknown way, and some because other fellows eat it. And yet there are many persons who question the value of sweets before competition, who say that this use is based on psychology and is merely a superstition. What are the facts?

In approaching the problem it is necessary to start at the beginning and gain an understanding of the processes that various sugars undergo upon ingestion. It is not by accident that the bulk of the diet of most people is made up of carbohydrates (such as starches in wheat, rye, rice, potatoes) nor is it by accident that the more people work or exercise the more carbohydrates are used. Although protein and fat furnish a certain amount of the required energy, the starches represent a more convenient source of energy—this be-

ing the reason why two-thirds of the average diet is starch.

Carbohydrates are divided into complex and simple sugars, starch being a complex sugar, and honey and fruits containing the simple sugars. In the process of digestion, the complex sugars are broken up into simple sugars (glucose) and in such form taken into the blood stream. This glucose may appear in the blood within from five to fifteen minutes after ingestion [Fig. 1]; the simpler the sugar, the shorter the time. Glucose is the best sugar in this respect, because it does not need to be digested.

It is necessary that we store up some of the sugar so that we may draw upon our reserve supply at any time



Excitement of the game may double the blood sugar of the players

of the day or night. The liver is the storehouse for this sugar. For convenience, the sugar is stored in the form of starch again—this time a different kind called animal starch or glycogen. When the organism is in need of sugar, this glycogen is immediately broken up into the simple sugar. But this is not the whole story.

Every automobile driver knows that although the gas tank may be full of gasoline one cannot start the motor unless there is some gas in the carburetor. Something similar to this happens in the muscles of the body. Our muscles are motors with carburetors attached, ready at all times to work for us. For this reason they must have some glycogen stored up in their cells.

When a nerve impulse reaches the muscle it breaks up the glycogen, thus liberating the energy necessary to bring about contraction. When oxygen is brought to the muscle it restores to its original state most of the broken-up glycogen; the remainder is burned up to carbon dioxide and water. If there is a lack of oxygen, then some of it remains as lactic acid.

The energy which is derived from sugar may be expressed in terms of

heat or calories. Let us look closely at these calories. In order to boil a glassful of water taken at room temperature it is necessary to expend 20 large calories. We can do this by burning 5 grams of sugar—about one cube—providing all the heat is utilized. When this same amount of sugar is used by the organism it produces the same amount of heat. In the body this sugar is used or burned so slowly and over such a widespread area that we do not notice it. It is not as if we had taken a glassful of boiling water into our systems.

In every machine only a part of the fuel is utilized for external work. In the human machine under favorable conditions, only about one-third is so used. We know that one Calorie is equivalent to 3,060 foot-pounds, therefore we may conclude that the same lump of sugar will furnish enough energy to lift a man weight 150 pounds to a height of 136 feet:

$$\frac{20 \times 3060 \text{ ft./lb.}}{3} = 20400 \text{ ft./lb.}$$

$$\frac{20400}{150} = 136 \text{ feet}$$

In order to lift a man to the top of the Empire State Building we can secure the necessary energy by eating nine lumps of sugar.

For walking one mile in 30 minutes we need  $1\frac{1}{2}$  lumps of sugar; the same amount of energy would be spent in running 100 yards in 10 seconds.

Since sugar furnishes so much energy and so little of it is necessary for even strenuous work, it was quite sensible that athletes and coaches began to use sugar immediately before a competition or sometimes in the course of it.

Often one hears: "Since I began to give sugar to my men, they have improved and also felt a great deal better . . . ." This statement is rather typical and many athletes will swear that it is true.

With all due respect to those who state it, this testimony, unfortunately, cannot be accepted as evidence in favor of sugar. Very often different men are being compared, and the whole administration of sugar is not conducted as a controlled experiment. Especially is it difficult to see the effect of sugar in games requiring skill, where clever combinations are more important than sheer brutal energy. The statement concerning the "feelings" offers as evidence subjective symptoms, and leads us to the pitfalls of

[Continued on Page 32]

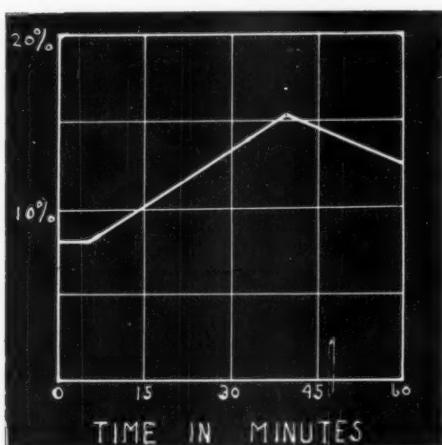


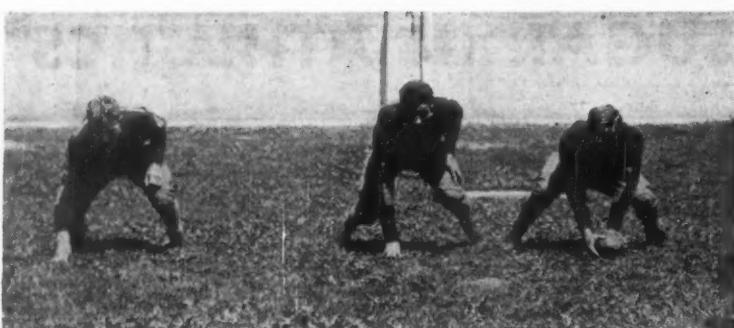
Diagram showing the time of absorption of the sugar. Fifty grams of glucose were taken by mouth. The blood sugar content increased in 8 minutes.

# THE TRIANGLE SHUFFLE BLOCK

By GEORGE W. SCOTT

The system of football in use at Fort Collins High School, Colorado, has been developed over a period of twenty-one years under one coach. That coach is Mr. George W. Scott, the author of this article. His system, calling for an unbalanced line and a single wingback, with its six running plays almost unchanged for twelve years, has led to eight State championships. The 1926 State championship team averaged but 143 pounds per man. Contrasted to this, his 1932 State championship team averaged 171 pounds per man. The editor of Scholastic Coach has asked Mr. Scott to describe the formation of his basic play and how the interference is assembled for it. The photographs are of Mr. Scott's own players and taken under his direction.

No. 1



No. 2



No. 3



No. 4



THE CENTER, THE RIGHT GUARD, AND THE OUTSIDE TACKLE, EXECUTING THE TRIANGLE SHUFFLE BLOCK

backfield man to head a real interference.

The basic play of our system, with its triangle shuffle block and the two linemen pulling out and heading the interference, is a powerful, quickly-executed off-tackle drive. In the sequence with this we use a steam-roller line smash, a heavy-interference reverse, a spinner used as a fake from either the reverse or off-tackle play, and a wide-pass end run which carries all the threat of a lateral. A triple-pass deception play is added for particular games. Other surprises are devised for special occasions.

Many times our team has gone into a game with instructions to use only the basic play with just enough reverses to keep the defense from over-shifting. See diagram and description on opposite page for details of the play.

**The triangle shuffle block—Photograph No. 1 at the top of the page**

THE problem of the high school football coach is somewhat different than that of the college coach. This has been said innumerable times before, but it bears repeating. Plays and the teaching of fundamentals must be made very simple and definite for high school players, and the reason for this is evident. The high school player has not been on the firing line long enough to gain that experience which enables the college player to

cope with plays and situations of a more complex character.

Our six running plays are based on blocking and interfering simple enough in themselves, but they require long and patient practise before the players are able to execute them efficiently. Nothing in all football is for me more beautiful to watch than three well-trained high school boys executing the triangle shuffle block, while two linemen pull out and join in with a

No. 6

PULLING OUT OF THE LINE



No. 5



shows the center, right guard No. 7 (follow diagram with photographs) and the outside tackle No. 9. These men, using the shuffle block, have the key blocking assignment on the play. This block requires a correct stance with feet well apart and weight balanced as shown in the photograph. If the play is to the right, as it goes in the photograph and diagram, the shuffle blockers rapidly move their left feet forward, half turn and drop to all fours, as in photographs No. 3 and 4. The player to the right of the center, outside tackle No. 9, has executed the movement perfectly, as far as can be determined without actually showing the defensive counter action.

The finish of the triangle shuffle block is shown in photograph No. 4, the shuffling, or moving-pressure contact, having taken place between photographs No. 3 and No. 4. Contact is quickly made by fast, low charging. If the defensive men use their hands they will be at a disadvantage, because the shuffle blockers are so close to the ground.

The triangle shuffle block can be made to cover about seven feet of front-line territory.

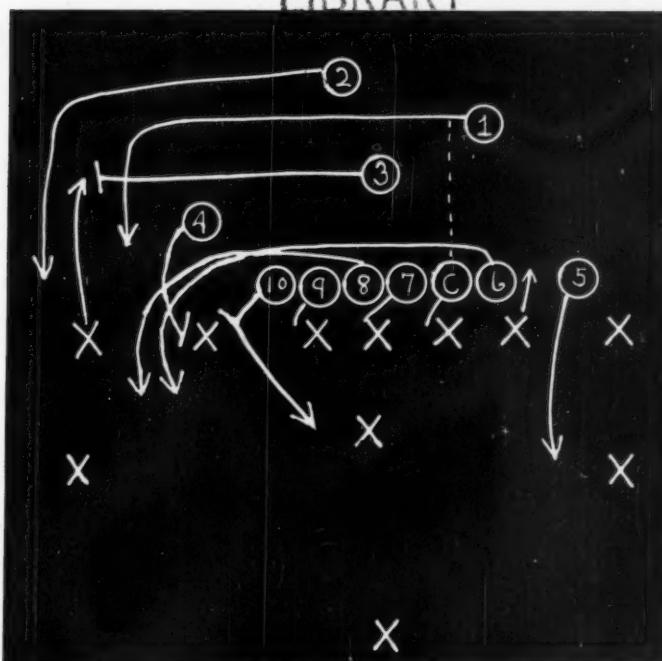
It is really a moving wall from the center to the strongside end. We very seldom have an opponent penetrate this wall.

The rapid shuffle while in contact keeps the defensive players always fighting for their balance.

**Pulling out of the line**—In our system, No. 6, the weakside guard, and No. 8, the inside tackle, join the interference. These men must come out fast and do something when they do come out. At the starting signal as the ball is snapped, these men draw the right foot back quickly, the left foot moves in the direction of the play, and the left shoulder is dropped low. Photographs No. 5 and No. 6 at the bottom of the opposite page, show them pulling out and picking up speed—with the center shown—using his shuffle block. Player No. 8, the inside tackle, first makes sure that the opposing tackle is down, and then goes for the fullback. Player No. 6, the weakside guard, cleans up anybody coming through the line and has for his definite assignment the defensive halfback coming up to the line.

The whole point is to gather the interference into position quickly, so as to strike with all possible force just off tackle before the defense can muster enough strength to counteract this thrust.

Since all plays under this system are run from exactly the same formation, the element of deception is always present. If the blocking assignments are carefully carried out there are but four men who can really stop



**THE BASIC PLAY**—The strong side end, No. 10, takes a hard low step into the tackle with his right foot and then blocks the fullback. The time required to take this step into the tackle allows the fullback to be in the correct position for blocking. The flanking back, No. 4, takes the tackle with a shoulder and leg block just as the tackle attempts to play the strong side end. This requires just a bit of hesitation and very careful timing. The center (C), right guard, No. 7, and outside tackle, No. 9, use a triangular shuffle block. This block which we develop to a very high degree makes it possible for one offensive man to take care of one defensive man. The inside tackle, No. 8, and weak side guard, No. 6, come out of the line and join the interference. Backs No. 3 and No. 2 start at the defensive left end, No. 2 going faster and apparently outside the end. The No. 3 back measures the end and rolls him with a thigh and shuffle block just as the end starts to use his hands on the No. 2 back. No. 2 cuts directly over the position occupied by the end and joins the interference. The weak side end fakes receiving a forward pass and helps keep the opposing half away from the line.

the play short of considerable yardage. These men are the tackle, end, full and half. Much practice is required before the interference will gather quickly and not cut in too soon. Many

other elements enter into this play but if the blocking assignments are carefully carried out the interference as shown can generally assure the yardage necessary.

## FIVE INTERSCHOLASTIC RECORDS BROKEN

Jesse Owens, all-around track and field star of East Technical High School of Cleveland, Ohio, won three events in the national interscholastic track and field meet in Chicago, June 17, breaking the National Federation records in all three events, and equaling the world's record for the 100-yard dash.

Owens, a Negro, ran the 100 in 9.4 seconds; the 220 in 20.7 seconds; and broad-jumped 24 feet, 9 $\frac{1}{2}$  inches. The half-mile National Federation record was broken by Bush of Sunset High, Dallas, Tex.; and Cope of Classen High, Oklahoma City, broke the 120-yard high hurdle record.

The winners, their performances and records broken:

**100-YD. DASH**—Owens of East Technical H. S., Cleveland, O. Time—9.4 sec. Breaks the N.F.S.H.S.A.A. record by two-tenths second, and equals the intercollegiate and world's record.

**220-YD. DASH**—Owens of East Technical H. S., Cleveland, O. Time—20.7 sec. Breaks the N.F.S.H.S.A.A. record by four-tenths second.

**440-YD. RUN**—Brown of Kansas Vocational School, Topeka, Kan. Time—49.3 sec. Natl. Federation record is 48.2 sec.

**880-YD. RUN**—Bush of Sunset H. S., Dallas, Tex. Time—1 min. 54.4 sec. Natl. Federation

record is 1m 55 sec. Breaks N.F.S.H.S.A.A. record by six-tenths second.

**ONE-MILE RUN**—Rideout, of Tuscola, Ill., H. S. Time—4 min. 25.4 sec. Natl. Federation record is 4 min. 23.6 sec.

**120-YD. HURDLE**—Cope of Classen H. S., Oklahoma City, Okla. Time—14.7 sec. Breaks N.F.S.H.S.A.A. record by two-tenths second.

**220-YD. HURDLES**—Doherty of Proviso H. S., Maywood, Ill. Time—23.7 sec. Natl. Federation record is 23.5 sec.

**RUNNING HIGH JUMP**—Albritton, East Technical H. S., Cleveland, O. Height—6 ft. 2 inches. Natl. Federation record is 6 ft. 6 inches.

**RUNNING BROAD JUMP**—Owens of East Technical, Cleveland, O. Distance—24 ft. 9 $\frac{1}{2}$  inches. Breaks N.F.S.H.S.A.A. record by 9 $\frac{1}{2}$  inches.

**SHOT PUT (12 POUNDS)**—Francis of Decatur Community H. S., Oberlin, Kan. Distance—53 ft. 3 inches. Natl. Federation record is 58 ft. 10 inches.

**JAVELIN THROW**—Jones of Walters, Okla., H. S. Distance—197 ft. 4 $\frac{1}{2}$  inches. Natl. Federation record is 205 ft. 1 $\frac{1}{4}$  inches.

**DISCUS THROW**—Winters of North H. S., Wichita, Kan. Distance—136 ft. 9 $\frac{1}{2}$  inches. Natl. Federation record is 154 ft. 6 $\frac{1}{2}$  inches.

**POLE VAULT**—Noble of Arkansas City H. S., Kan. Height—13 ft. 4 $\frac{1}{2}$  inches. Natl. Federation record is 13 ft. 6 $\frac{1}{2}$  inches.

**HALF-MILE RELAY**—Ottawa, Kan., H. S. Time—1 min. 31 sec. Natl. Federation record is 1 min. 28.2 sec.

# FUNDAMENTALS OF SOCCER

By K. P. ELERIN

The following article by the director of physical education at the Stoneham, Mass., High School, consists of material that has been used in actual programs in the schools of Stoneham.

**D**URING recent years many directors of physical education have come to recognize in soccer a fine foundation for an out-of-door program to be used throughout the fall and early winter seasons. Formerly a sport confined to use with boys, it has outgrown that condition and is now being used with girls, and with equal success, although its rules are somewhat modified for girls' play.

Soccer has, besides numerous excellent educational qualities, an economic recommendation which few athletic activities can surpass, namely: that it may be promoted on a rather large scale at an expense wholly out of proportion with the vast number of pupils affected by it. Its equipment requires no special room for storage; is easily handled and may be used out of its own season for any number of recreational activities besides its own. Student equipment, both for classwork and intramurals, is the same as is used throughout the school year. It can, of course, be made more elaborate by the use of special uniforms as in the case where each class is represented by a select group, or where varsity teams are organized for interscholastic competition.

This article is not concerned, however, with a justification of the sport, but rather with the fundamentals—the early training and techniques necessary to establish a later play period when actual competitive participation may result. Throughout the lower grades, teaching may be effected with mixed groups and these, if possible, should be divided into squads numbering not more than ten pupils per ball to insure adequate activity.

Through the seventh, eighth and ninth grades and the junior and the senior high schools as well, the boys and girls should be segregated, as the activity for each is not applicable to both.

Progress at first is apt to be rather slow due to the use of a series of motor controls quite foreign to most boys and girls; the feet playing the major part in this new activity. Extreme care and patience must be exercised in drilling the fundamentals of soccer as in any other educational process, for the game once realized is only well-played so far as accurate control of the ball is evidenced at all times. While each phase of work is being taught it would be wise to associate it with future

use when the activity is organized as a game.

## Surface contact

The first and most important principle to be considered is one purely physical. The foot must come into as much surface contact with the ball as is possible, in order to achieve a fair measure of control both for accuracy in direction and speed of flight. If one were to apply this theory to the action of batting the ball with the hand he would naturally assume that the best results could be obtained by using the full palm. No one would especially recommend the use of the fingertips to bat an inflated ball, yet the natural movement of the child is to kick with the toes. After a certain skill has been acquired this method

	$\frac{1}{2}$	1	$\frac{1}{2}$	
$\frac{1}{2}$	1	2	1	$\frac{1}{2}$
1	2	3	2	1
$\frac{1}{2}$	1	2	1	$\frac{1}{2}$
$\frac{1}{2}$	1	$\frac{1}{2}$		

FIG. II

may be the logical one to apply under some circumstances, but for the beginner it is not to be considered. In the toe kick, feasible when occasion demands such a movement, contact with ball surface amounts to no more than a few square inches, which is not sufficient, as is apparent when batting a ball with the fingertips. It is quite impossible to use the sole of the foot in such an action as kicking because it involves a combined extension of the leg with flexion of the foot. Anatomical structure then would indicate that the best control would result from a use of the top of the toes, the upper arch, and the instep as a whole, with a surface contact involving some fifteen or twenty square inches of the sphere. It is this use of the instep which governs the action in learning to kick properly.

## Instep kick

The pupil stands facing the ball in the direction toward which the ball is to be kicked, with the left foot immediately alongside the ball and the right knee directly above and the right foot elevated in back of the ball (leg flexion). It is essential here to stress the pointing of the toes (foot extension) so that the contact is as nearly flat as possible. The kick is made with the left leg almost straight and the body inclined slightly forward, the final contact with the ball being made by

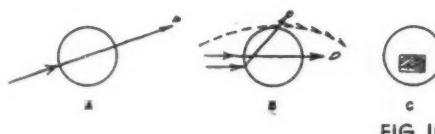


FIG. III

To explain the opportunity for inaccuracy of the toe kick the above illustration may prove helpful. In A we see the direction of force necessary to propel the ball in the desired direction. In B we see the result of a kick made too high or too low upon the surface of the ball. In C we see the limited space upon which a kick may be delivered in order to accurately propel the ball straight forward. Add to this the fact that the toe will only come into as much contact with the ball as is allowed by the actual size of the shoe, we find that the chances for good direction are few indeed.

snapping the right leg suddenly, following through with the foot after the ball has been hit. A kick executed in this manner will propel the ball along the ground with no rise, and this principle of keeping the ball on the ground is governed by the position of the left foot. The farther to the rear of the ball that the left foot is placed, the greater the tendency will be for the ball to rise. When the kick is made, the muscular action of the foot and leg is the reverse of that which takes place in putting the right foot in position to make the kick.

The stationary kick with no advance toward the ball makes for early accuracy in a high degree, and the first few trials should be made with as simple a movement as possible, or necessary to roll the ball forward, without any attempt to attain speed. Good direction is the first aim to be realized, and various methods may be

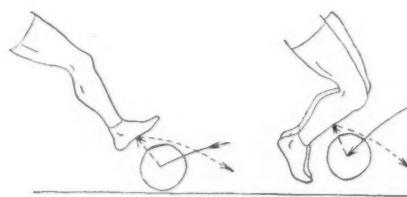


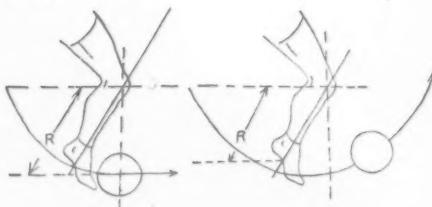
FIG. IV

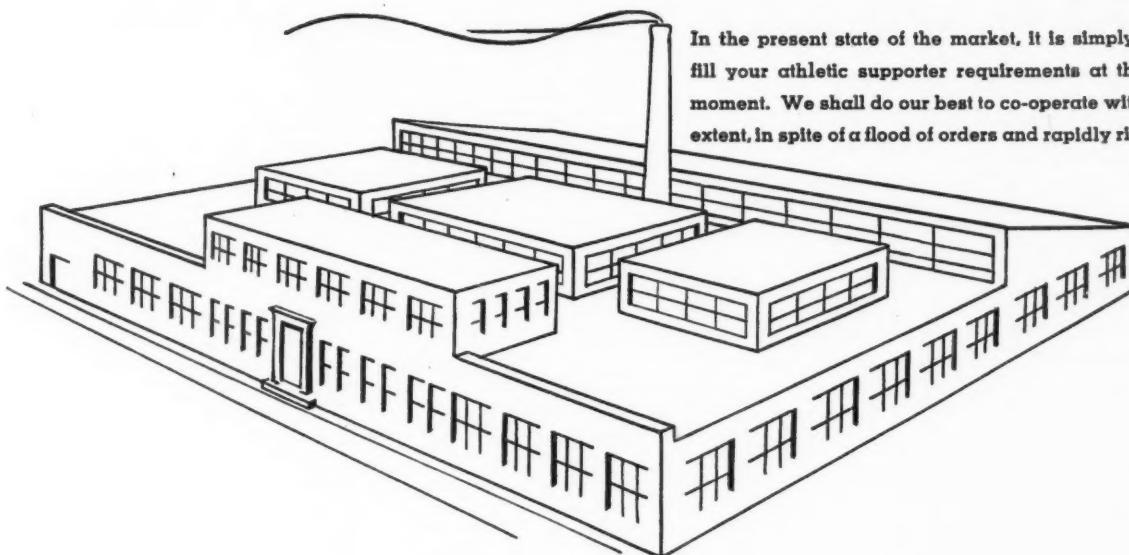
used to rouse interest toward that end. Quite popular among these is the use of some object at which the kick may be directed. An Indian Club or similar object is placed at a short distance from the kicker and an attempt is made to bowl it over. Scoring hits for squads or individuals will considerably enhance interest.

It is wise to confine the first few lessons to ground kicking, laying stress on the position of the feet: the left foot close to, and alongside the ball with the right foot well extended. As in golf, the eyes should be kept on the ball as the kick is made so that the foot meets the ball properly. After the stationary kick has been introduced with a fair degree of success, the pupil may increase the speed of the ball by standing a few feet away and advancing

[Continued on page 24]

FIG. I





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# THE GOVERNMENT SURVEY OF ATHLETICS

The following is an abstract of the U. S. Government monograph *Intramural and Interscholastic Athletics* published this year by the Office of Education as part of the National Survey of Secondary Education. The manuscript is by P. Roy Brammell, specialist in school administration of the National Survey. Scholastic Coach presents this abstract with the permission of the Office of Education.\*

**Method of obtaining data.**—A special inquiry form concerning intramural and interscholastic athletics was sent to 760 secondary schools which had been designated by various persons in authority as doing commendable work in the field of athletics. Some of these schools were probably cited because of their success in athletic competitions. Means of locating schools for this study were through correspondence with state school officers, city superintendents, principals, officers of state high school athletic associations, state directors of physical education, county superintendents of schools and recognized writers and investigators in the field of secondary school athletics; and through consultation of handbooks and other secondary-school publications. Forty-three percent, or 327 schools, replied to the inquiry; and in addition the investigator visited 36 schools in various parts of the U.S.A.

*Director Stagg's list.*

—As a matter of interest the names and addresses of all schools which competed in the National Interscholastic Basketball Tournament since 1921 were secured from the office of A. A. Stagg, University of Chicago. A check-up of this list against the list of outstanding schools submitted by the state school officers showed that of the 273 separate schools which entered this tournament during the 10-year period between 1921 and 1930 inclusive, only 9, or 3.3 per cent, were listed by the above named officers. Of the 70 different schools which entered the tournament either in 1929 or 1930,† only 1 was mentioned by these same officers as doing especially promising work in the field of athletics. That is to say, success in interscholastic athletics, as measured by participation in the National Interscholastic Basketball Tournament, does not, in the judgments of state school officers, often stamp a school as doing outstanding work in the field of athletics.

**Sports included in the intramural program.**—In considering the program of intramural athletics one of the first ques-

tions which presents itself is, "What sports are to be included in the intramural program?" This question must be answered by the schools in the light of the school's play facilities, its conditions of climate, and the degree to which the sports lend themselves to the furthering of the aims of intramural competitions. Furthermore, some sports are more adapted to boys' play than to girls', and vice versa. The grade placement of pupils is also entitled to careful consideration.

Special effort was made in this study to determine the exact sports which were included in the intramural programs in the schools selected for investigation. These schools, it will be remembered, had been designated as having well-directed athletic programs. In all, 65 sports were named by the 231 schools reporting intramural programs.

In the boys' sports the consistency with

schools is the New Trier Township High School in Winnetka, Ill. Here hundreds of boys are regularly equipped to play regular football, and do play it according to an elaborate schedule. Special attention is given to the training of pupil officials. Also, in the San Antonio (Tex.) junior high schools, about 700 boys participate each year in intramural football.

A consideration of the sports in relation to the number of pupils enrolled in school brings out several interesting facts. For the boys, there is a tendency for football to rank lower as an intramural sport in the larger enrollment groups than in the smaller. This tendency is noteworthy in view of the fact that larger enrollments increase the possibility of the organization of numerous football squads. Furthermore, there is a noticeable tendency in the upper enrollment groups for sports which can be carried over into later life to

rank high in the list of sports fostered. Of course it can be said with some justification that sports such as swimming and golf can be fostered more easily in the towns where the larger secondary schools are located. This is not to say, however, that these schools were obliged to include these sports in their intramural programs. It must be recorded to their credit that they have done so. Schools in the smaller enrollment groups can not contend, with

justification, that they are forced to build their intramural programs around sports which have no carry-over value. Certainly the facilities for tennis, volleyball, handball, etc., are as easily and as cheaply maintained as those for football, track and field, baseball, and the like. For the girls, basketball and volleyball occupy the first two positions consistently for all enrollment groups, except that in the highest group, volleyball is replaced by tennis.

However, authorities in many other schools feel that all the benefits of regular football, including the vigorous physical exercise for the participants and the development of football skill to be used later in interscholastic competition, can be realized if the tackle is omitted. That is to say, tag or touch football can be a vigorous game, including everything from signals to the kick for goal, and yet be relatively hazardless. Such a modification of play is thought especially necessary if football is to be engaged in by junior high school boys.

## Carry-over value

In closing the discussion of the sports included in the intramural program, special credit should be given to the schools which are making some kind of participa-

**Average Number of Pupils Participating in 12 Intramural Sports According to Enrollment and Type of School**

Sport	Enrollment										Type of high school					
	100 and fewer		101 to 300		301 to 750		751 to 2,000		2,001 and more		4-year		Junior		Other	
	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Football	25	37	65	175	96	71	241	80								
Basketball	29	32	52	47	107	98	245	169	339	160	143	76	274	197	170	139
Baseball	27	54	49	47	106	110	196	202	241	192	105	8	269	279	129	134
Track and field	19	19	44	44	93	92	215	222	407	122	99	60	271	274	244	166
Tennis	22	19	19	24	22	27	58	82	48	58	41	42	129	105	41	62
Golf							29	52	96	42	47	53	54	42	42	95
Swimming					60	25	188	136	80	68	132	79	181	33	115	139
Soccer			80	60	97	150	266	205	221	112	177	106	274	285	103	73
Volleyball	27	28	53	59	190	139	256	226	487	132	161	91	387	310	175	136
Gymnastics	20	27	43	44	245	230	316	316	868	770	454	255	408	288	325	274
Handball			75		286	150	106		93		93		284		144	150
Captainball					66	284	288	470	40	312	40	312		335		

which basketball, track and field, and baseball lead as intramural sports, is outstanding. The general trend of tennis to rank higher in the upper grades than in the lower is encouraging, because of the carry-over value which this sport possesses. Football, as might be expected, is strongest in the four highest grades.

For the girls, basketball and volleyball occupy the foremost positions in all grades, almost without exception. The tendency for tennis to displace track and field and baseball in the higher grades is noteworthy. Golf has begun to take its place noticeably in the list of intramural sports for girls.

**Football as an intramural sport.**—The question of whether or not football should be included in the list of sports recommended for an intramural program for boys has been debated freely. Although various practices and attitudes were observed among the schools during visitation, the expense, the physical hazard, and the difficulty of procuring proper officiating of games has led a majority of the more outstanding schools to discourage football, as it is regularly played, as an intramural sport. This is not to say that certain schools of recognized high standing have not tried out this sport and declared enthusiastically for its promotion in the intramural program. Notable among such

\*For the complete monograph (142 pp.) send ten cents to the Superintendent of Documents, Washington, D. C. Ask for Bulletin No. 17, Monograph No. 27 *Intramural and Interscholastic Athletics*.

†This (1930) was the last of the National Interscholastic Basketball Tournaments. A National Catholic Interscholastic Tournament is still held each year at Loyola University in Chicago.

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# The Problems That are Peculiar to High Schools

## Carefully Viewed in the Light of Modern Trends

tion in intramural sports available to all pupils and at the same time are including such sports as have large carry-over value. In other words, types of recreation are being learned which can be continued throughout adult life. Efforts of this kind were observed in several of the schools visited. It must be admitted that not all sports which lend themselves well to participation by large numbers are likely to be played by the pupils after they have left school, yet these sports are justified because they make possible a maximum number of participants. Basketball, baseball, and track and field are illustrative of these types of sports. It seems clear, however, that a program of intramural sports should not stop with games such as these. On the contrary, opportunity should be given for pupils to learn games and activities in which they can engage after leaving school. A few such games for boys are tennis, swimming, golf, handball, volleyball, ping-pong, horseshoes, bowling, skating, and the like. Similar activities for girls might include tennis golf, volleyball, rhythmic, archery, hiking, skating, bowling, horseback riding, and others.

### Rules of eligibility

One hundred twenty of the 231 schools having intramural programs report that they have definite eligibility rules governing team membership in intramural sports. Ninety-six schools report that no rules are maintained, and 111 did not indicate their practices in this regard. It ought to be pointed out immediately that intramural athletics are for all pupils, and any rules of eligibility which tend to keep pupils out of these sports are defeating the general purpose of these games. However, there is no indication among the schools that any such limitations are set up. The aim of these intramural eligibility regulations is not the setting up of barriers to those who need to participate rather, the regulations are for the purpose of determining the amount of participation and for setting up of goals of conduct. For example, in the Des Moines secondary schools the pupils are allowed to play on one team only during a given scheduled season. In addition to this group sport, however, they may enter contests in two individual sports which do not conflict with the team schedule. In Altoona, Pa., High School the following intramural eligibility rules are set up: (1) Neither varsity players nor present squad members in a particular sport are eligible, (2) there are no scholastic requirements, (3) a player is not allowed to play on more than one team in the same sport, and (4) any player may be ruled ineligible to compete in future contests for unsportsmanlike conduct, refusal to abide by the decisions of the officials, and abusive or vulgar language. Whatever the regulations may be, the intramural program ought to be developed to the point where pupils will consider the opportunity of participating in it a privilege. It is no doubt correct that there should be no scholarship requirement. It is probably correct also that too much emphasis should not be laid on the matter of conduct, that is, as a means of barring pupils from participation. Enough pressure can be administered on this point during the activi-

ties. It is one of the commendable contributions of intramural sports that they give vigorous employment to the so-called problem pupils, who, if they were barred from participation, might be engaged in pursuits less sanctionable and less uplifting.

### Intramural athletics and physical education

There are three main relationships briefly to be considered here, namely, the relationship of intramural athletics to physical education, to the health work of the school, and to interscholastic athletics.

It is probably not too much to say that the administrators of well-directed programs of physical education find a plan of intramural games desirable, if not necessary, as a place where the "skills, knowledges, and appreciations, and desires" learned in physical education can be put into enjoyable practice. Such a plan makes of intramural athletics an unformalized extension of the work in physical education, and presupposes a close cooperation between those in charge of the two programs. In this connection, the extent to which the intramural programs are under the direction of the directors of physical education in the schools included in this study is noteworthy. Of the 189 schools responding to this inquiry, 162 say that the physical education director also directs intramural athletics, whereas only 27 report that he does not. The junior high schools are almost unanimous (23 to 1) in reporting such a plan. This proportion is a great deal higher than that for either of the other two types of schools. The junior high schools are also out in front in reporting that all intramural coaching is under the control of the directors of physical education. Of course, this may be due in part to the fact that other persons on whom the control might fall, for example, coaches of regular athletic teams, do not appear so frequently in the junior high schools' rosters of teachers as in the rosters of the other types of schools. At any rate, whatever the type of school, if a director of physical education is employed, he is the logical person to direct the intramural activities, using as assistants in this program coaches, home-room teachers, physical education instructors, upper classmen, and other persons who are available for this work and who are willing to strive toward the achievement of the greatest good to the greatest number.

### Intramural and interscholastic athletics

The problem of the relationship between intramural and interscholastic athletics has ramifications too numerous to be thoroughly exploited in this report. A few things, however, need to be mentioned.

In visiting secondary schools one finds an occasional school in which those participating in the program of intramural sports are pupils who have either tried and failed to make a regular school team or

who have ambitions of breaking into the squad of regulars. In such a case intramural athletics becomes the training ground for first-team material and as such are closely watched by coaches of interscholastic teams. Certainly there should be some plan of games in the school in which pupils unable to find places on interscholastic squads may play; however, for the emphasis to be laid upon the fact that those participating in these sports are candidates for regular teams is a wrong placement of emphasis. Rather, it will be much more helpful to the pupils in general if it is understood that the intramural program is organized for all pupils not on regular teams, and more especially for those who never have nor wish to engage in interscholastic sports. To be sure, there can be no objection if out of the intramural ranks athletes for the interscholastic squads are developed. In fact, directors of physical education often pointed out to the investigator that sensible intramural play is probably the most developing thing a potential athlete can do during the first year or two of his high-school life. However, if the correct conception of intramurals is held, such a development of regular players is purely incidental.

Another question of relationship, which is a moot one, has to do with coaches. Shall the coaches of interscholastic teams coach intramural play? The experience of principals in their efforts to solve this problem was inquired into rather thoroughly during visitation. Judgments are rather closely divided. Some principals testify, after a trial, that "never again" will they allow a coach of an interscholastic team to direct either the intramural or the physical education program. The temptation to teach, in the main, skills useful to interscholastic players and to give exceptional attention to pupils showing signs of possessing unusual playing caliber is too great. On the other hand, numerous principals state that the only way effectively to bring interscholastic athletics under the general aim of health and recreation is to put them in charge of persons who are also in charge of the health work and the general program of play in the school. It ought to be the case in any school that the persons, including regular coaches, selected to assist in carrying out the intramural program know how and are willing to cooperate toward securing the ends for which intramural programs exist. Perhaps this ideal of keeping in mind the good of the greatest number is impossible in some schools at present. It may be that before it can be realized the coaches of interscholastic teams must be required to have a minimum amount of training in physical education and health work. Such a requirement, although it is rare, is not unknown.

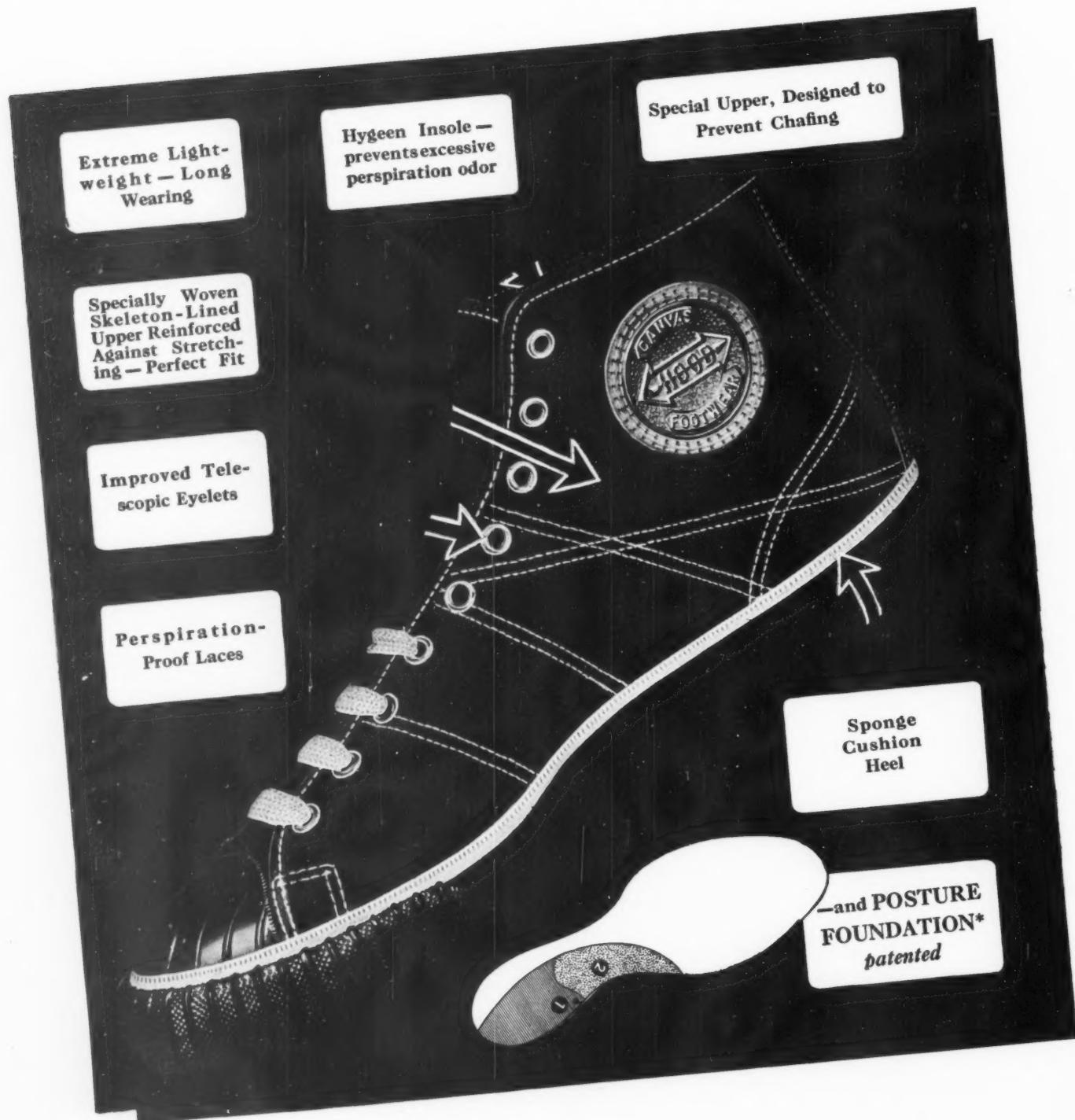
### Finance

*The problem.*—The amount of money required to finance programs of interscholastic athletics is perhaps larger in most sec-

[Continued on page 22]

The 1933

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# INTERSCHOLASTIC GROUP COMPETITION

By W. B. McKITTRICK

Mr. McKittrick is director of athletics at Arcata Union High School, Arcata, California.

In these days of excessive taxation and rampant criticism of governmental activities, including the financing and functioning of the public schools, many suggestions for effecting economies are being brought forward. Many of these suggestions if put into effect, would prove to be expensive economies in the long run. It would therefore seem that those interested in the welfare of the schools should take the initiative in determining what changes should be made and in just what ways the school dollar may be stretched to its utmost capacity.

It is sound economy to see that full use is made of existing equipment. In most schools a considerable sum has been spent to provide gymnasiums, athletic fields, apparatus and supplies. When, as the common criticism runs, this equipment is used in the main by a select group of skilled athletes groomed to represent the institution in inter-school contests while the majority of the boys sit on the sidelines, the cost per athlete is relatively high. To increase the number of pupils deriving

## Four-point System

Exponent	Grade	Age Yrs. Mos.	Height Inches	Weight Pounds	Sum of Exponents
7		12-0	57	81	
		12-5	58	85	
8		12-6	59	86	
		12-11	89		
9		13-0	60	90	
		13-5	61	94	
10		13-6	95		
		13-11	62	100	
11	9-A	14-0	101		
		14-5	63	106	
12	9-B	14-6	107		
		14-11	64	112	
13	10-A	15-0	113		
		15-5	65	117	
14	10-B	15-6	118		
		15-11	66	122	
15	11-A	16-0	123		
		16-5	127		
16	11-B	16-6	128		
		16-11	130		
17	12-A	17-0	131		
		17-5	133		
18	12-B	17-6	134		
		17-11	68	135	
19		18-0	136		
		18-5	138		
20		18-6	139		
		18-11	69	141	
21		19-0 and over	Over 69	Over 141	

Example:  
Boy in grade 9B—Exponent for grade is 12  
Age 15 years 2 months—Exponent for age is 13  
Height: 63 inches—Exponent for height is 11  
Weight: 119 pounds—Exponent for weight is 14  
Sum of Exponents 50  
Class C

The plan for increasing the participation in games, as it works out in California

benefits from this capital outlay is to reduce the cost per pupil and to effect a genuine, far-reaching and enduring economy—the sort of economy the taxpayer has a right to demand; the sort of economy the school administrator should seek at all times to achieve; an economy that increases rather than destroys the efficiency of the public school.

Athletic directors as well as administrators have recognized the validity of such criticism and have sought to improve the situation in several ways. One has been the increased emphasis upon intra-mural athletics. Another method has been to encourage more boys to turn out for varsity sports and to carry larger squads. It is no longer uncommon for the football squad to boast fifty or sixty members, or basketball to include twenty or twenty-five boys.

A third development has been the building up of class teams, the term being used to apply to groups of boys divided on the basis of age, weight, height, and sometimes the grade in school. This system has grown in California until nearly all high schools in this state are represented by two and sometimes three teams in basketball and track, while some of the larger schools may even have two football and baseball teams.

At first, coaches sought to solve this problem of increased participation by arranging games for the second-string boys to play. This succeeded to a certain extent, but the weaknesses of such a solution soon became apparent. In the first place, little or no interest was attached to these games by anyone except the participants; the varsity team still held the spotlight. In the second place, ability was the one factor that determined the grouping. Immature boys in both the first and second string were pitted against mature players, despite the fact that such practice runs counter to one of the fundamental principles of physical education theory, namely that pre-pubescent boys should not be forced to compete with boys of post-pubescent age.

Recognition of this evil led to an attempt to improve the situation by grouping the players on the basis of weight. The boys were weighed before each game and were not permitted to participate in a particular game if they exceeded the fixed weight. They might compete in the next contest,

Exponent	Age Yrs. Mos.	Height Inches	Weight Pounds
26			80
27			81-83
28	13-0 13-3	57	84-86
29	13-4 13-7	58	87-89
30	13-8 13-11		90-92
31	14-0 14-2	59	93-95
32	14-3 14-5	60	96-98
33	14-6 14-8	61	99-101
34	14-9 14-11		102-104
35	15-0 15-2	62	105-107
36	15-3 15-5	63	108-110
37	15-6 15-8	64	111-113
38	15-9 15-11		114-116
39	16-0 16-3	65	117-119
40	16-4 16-7		120-122
41	16-8 16-11	66	123-125
42	17-0 17-3		126-128
43	17-4 17-7	67	129-131
44	17-8 17-11	68	132-134
45			135-137
46	18-0 18-5	69	138-140
47			141-143
48	18-6 18-11	70	144-146
49			147-149
50	19-0 19-11	72	150-152
51			153-155
52			156-158
53	20-0 20-11		159

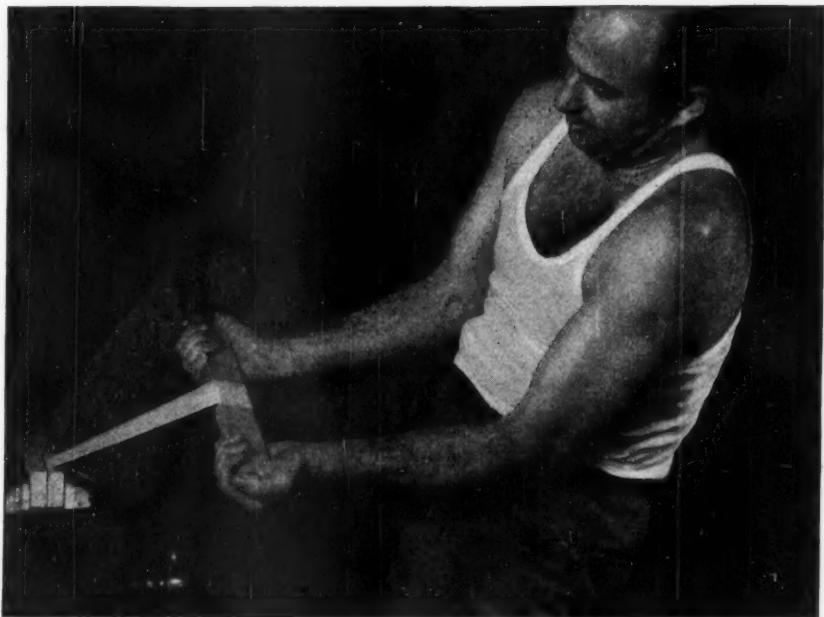
Example:  
Boy aged 16 years, 5 months—Exponent 40  
Height: 67 inches—Exponent 43  
Weight: 116 pounds—Exponent 38  
Sum of Exponents 121  
Class B

## Three-point System

provided they were able to make the weight requirement. This obviously led to training down by the athlete, either with or without the sanction of the coach, not only for one game, but often for several contests throughout the season.

When it became apparent that weight alone was not satisfactory as a dividing force, the four-point system was introduced in California. Height, age, weight, and class in school were considered, a table of exponents being [Continued on Page 28]

# A NEW ADHESIVE FOR ATHLETES ORTHALETIC PLASTER

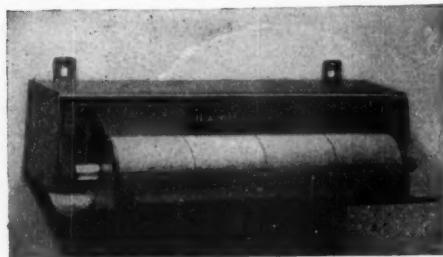


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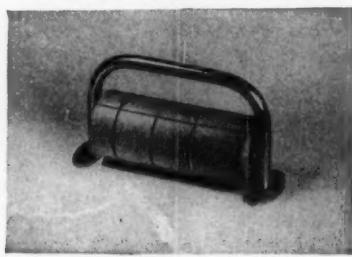
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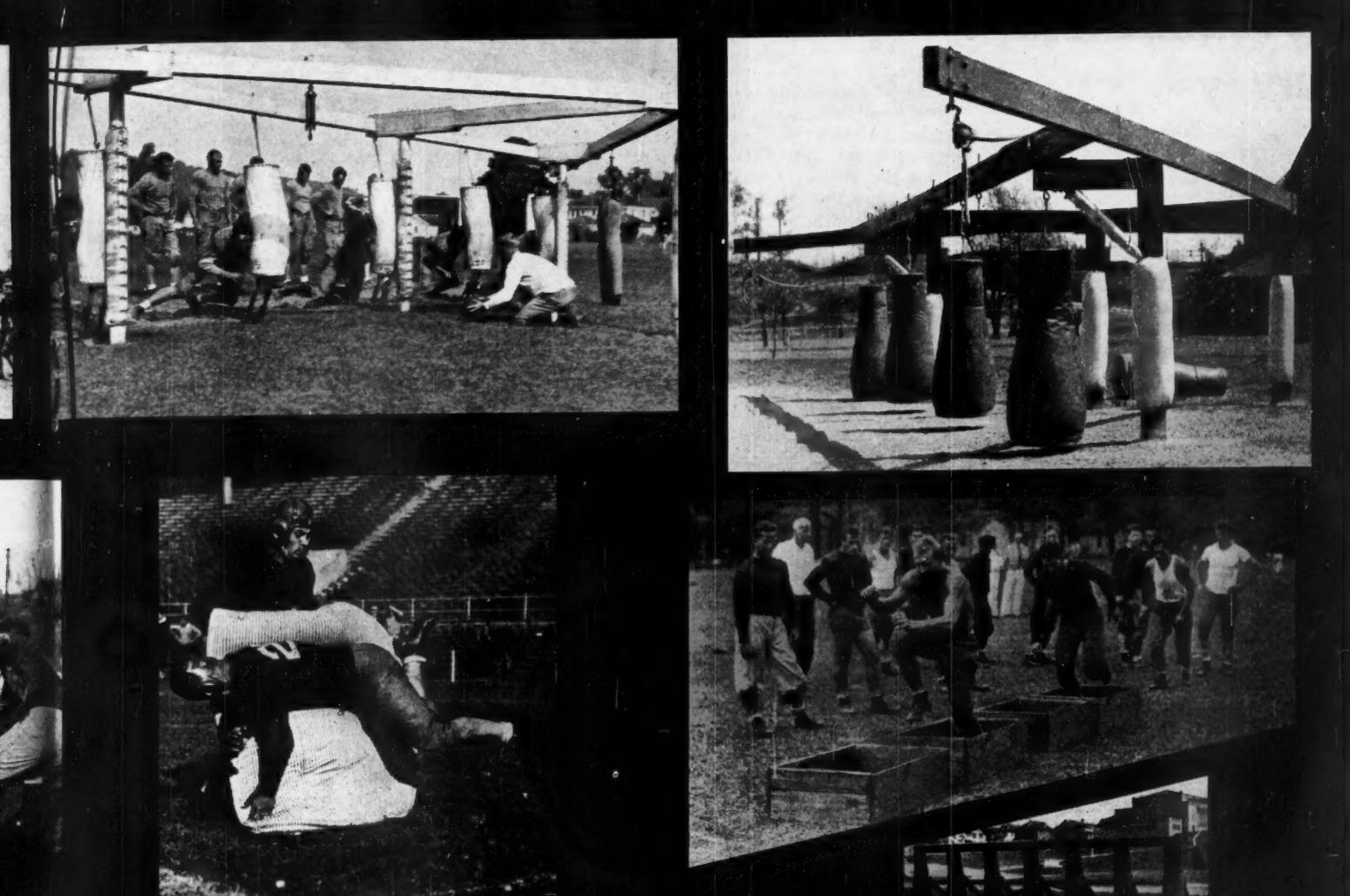
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Institution.....



Most of the photographs presented here speak for themselves. The one in the upper right-hand corner shows the very latest model convertible gallows, designed by Pop Warner for his 1933 Temple University squad, in Philadelphia. This machine, which is used for the development of the offense, represents the defensive line, and can be converted from a sixman line to a seven-man line, or vice versa, by merely changing the spacing of the dummies. Notice the arrangement for hanging the

THE M  
IS A W  
OPPO

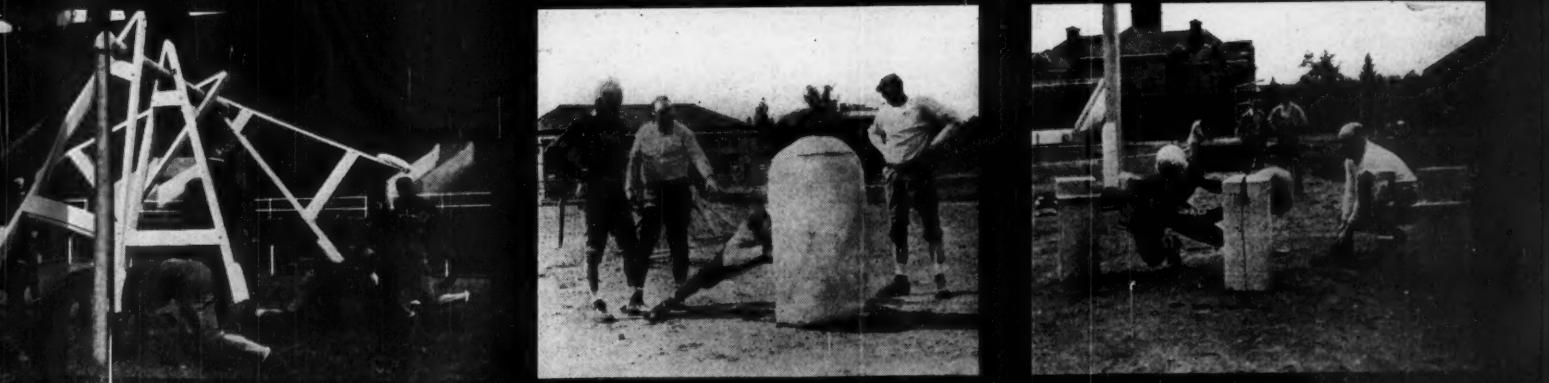


## THE MACHINE IS A WORTHY OPPONENT

defensive ends across the line of scrimmage. The picture does not show the ends in position.

● The photographs across the bottom of the page, with the exception of the one in the center of the row, show four of the devices used at the State University of Montana.

● The photograph in the center of the bottom row shows the device used by the University of Pennsylvania to develop the shoulder charge.



## Government Survey

[Continued from page 15]

ondary schools than the amount required for any other extracurriculum activity. In fact, in a larger number of schools the amount received and expended in promoting these activities during a school year involve many thousands of dollars. The demand for these games is so pronounced, and they are so much a tradition in many schools, that a host of means are resorted to in order that the funds necessary for their maintenance may be procured. In most schools the interscholastic athletic program is called upon to be selfsupporting. Winning teams are always capable of drawing larger crowds to their contests than those with only average skill in performance. Large crowds always mean more money. Hence, since the sports must usually be self-supporting, there is danger of laying too much emphasis on developing championship teams, in order that the money necessary to continued competitions may be forthcoming. If these activities could in some way be freed from the necessity of self-subsidization, the problem of doing away with certain evils would disappear, or at least its solution would be simplified.

### Retain admission charge

Not many secondary schools in the United States are desirous that boards of education subsidize programs of interscholastic athletics to the extent that nominal admission charges to games will be eliminated. In fact, some school heads feel that, if for no other reason, a nominal charge is necessary to keep the "riff-raff" from the sidelines. This feeling was expressed, for example, during an interview with a school official in Kansas City, Mo. The situation, however, in many schools is one in which the season's gate receipts are insufficient to cover the season's expenses. This situation is most frequently found in schools whose teams are rather regularly defeated. When this is the case, there is a frequently expressed feeling that the board of education should make up the deficit. Are the interscholastic athletics entitled to such assistance?

Within recent years a definite movement has grown up in the United States to make extracurriculum activities contribute to the educational aims of the school. There is a tendency to consider these activities not "outside" but as a part of the proper educative functions of the school. In fact, some writers in this field have ceased to call them extracurriculum activities, and are designating them as "co-curriculum" activities. Perhaps this differentiation could serve to determine the right of certain activities, including interscholastic athletics, to share the financial support of the board of education. To the extent that any activity contributes training desirable in the general education of children, to the same extent that activity is entitled to a subsidy by the board of education, such as is necessary to its continuation. Such a

measure is a trying one for interscholastic athletics. If it were applied seriously it would perhaps lead to the abandonment of certain activities, or at least to a careful study of the effects on health of certain sports, and to a careful readjustment in administration and supervision whereby present time interferences, overemphasis, and the like would be eliminated. However, once the elements in interscholastic athletics which tend to defeat educational goals have been removed, then these activities are entitled to support. Sports, interscholastic or intramural, which are helpful to the present development and future enjoyment of children ought to be maintained. Once their contribution to educational goals is established, the funds necessary to their continuation ought to be guaranteed by the board of education. This is not to say that the entire financial burden should fall upon the board of education. Rather, if a deficit exists after a season of competition, during which a reasonable admission price to contests has been charged, in a sport recognized as beneficial to the children, such a deficit ought to be made up by the board. Certainly the schools should not be forced to resort to the educationally expensive plan of putting on carnivals, soliciting donations, and staging plays in order to make up deficits, provided, of course, that, after reasonable efforts to avoid them, the deficits have occurred in sports whose competitions are recognized as beneficial. The educational legitimacy of the contests is the necessary prerequisite to subsidization. And, to be sure, the entire program of interscholastic athletics should be made to contribute to the general educational aims of the school. When it does that, the financial support necessary to its maintenance, when the securing of such funds by the schools themselves interrupts the educational program, becomes a proper item for the budget of the board of education.

### Some methods other than season tickets and gate receipts

In a high school in Virginia the investigator found the director of athletics in the lunch room counting out the money. In this school the school lunch is managed by the athletic association, the profits going into the athletic treasury. In a high school visited in Georgia a part of the dormitory funds is used to support interscholastic athletic programs. In Alabama a high school was visited in which a school supply stand selling pencils, tablets, and the like is maintained in the lunch room. The profits from this stand, about \$75 a year, go into the athletic fund. In Tennessee a high school was visited in which the money taken in at the school cafeteria and the proceeds from the school opera are used to promote athletics. It happens that this school is located close to a fair grounds and has some vacant lots which are rented as parking space. These funds are used in helping to pay athletic expenses. During the winter a tournament among gymnasium classes, extending over a period of six weeks, is held. A charge of 1 cent admission to the games netted the school about \$75, enough to buy the equipment necessary for track in the spring. The director

of physical education for girls in this school lamented to the investigator that "all money from all sources" goes to support football.

It is not the purpose here in any way to criticize unfavorably the schools which must resort to methods of raising money such as those described above. The unfortunate fact is that such means must be resorted to at all. Legitimate student activities should not be called upon to resort to such means for support. This is not to say that all sports are educationally justified. Those that are, if they can not be self-supporting, should be sufficiently subsidized by boards of education to meet deficits, in order that the worry, confusion, and loss of time involved in raising debit moneys may be avoided.

### Coaches

*Employment and means of measuring success.*—Two hundred and twenty-three of the 327 schools report that regular coaches are employed to coach teams in interscholastic sports. In 47 schools the success of the coach is said to be judged on the basis of his ability to develop winning teams. In 4 cases the respondents said that only in part was the success of the coach measured in this way. One respondent explained that the community rated the coach according to his ability to win, although the administrators of the school were not so minded.

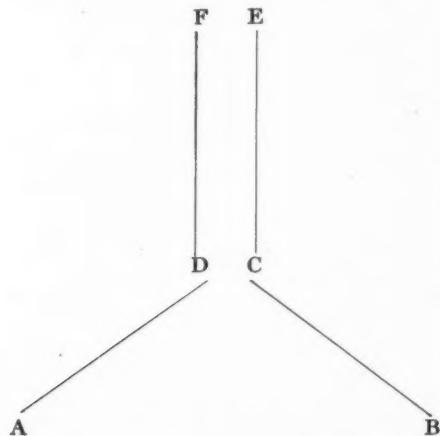
*Coaches as teachers of classroom subjects.*—Ninety per cent of the 327 schools report that the athletic coach is a regularly employed member of the faculty; 5 per cent say that he is not; and 5 per cent did not report. In 78 per cent of the schools the coaches teach regular classroom subjects. In 194 schools the athletic coaches are rated by school administrators as on a par with other faculty members in their ability as teachers of regular classroom subjects; 24 administrators rate them as superior to other teachers; and 31 rate them as inferior. In 161 schools the average salary of the coaches is higher than that for other teachers, not including administrative officers. In 147 schools the salary of the coaches does not average higher than that of other teachers. There is an interesting comparison to be made between the data regarding salaries and those regarding teaching ability. Whereas in only 7 per cent of the schools the coaches are rated as superior to other faculty members as teachers of regular classroom subjects, in 50 per cent of the schools the coaches receive higher salaries than the other faculty members. It appears, therefore, that in many of the schools, coaching ability, even though it may not be accompanied by average teaching ability, commands a higher-than-average salary.

*Coaches as members of the faculty.*—In most states the coaches of interscholastic sports are required to be regular members of the high-school faculty. The wisdom of such a regulation was demonstrated during visitation for this study. An illustration or two will show what is meant. In a high school in North Carolina a special coach for football was employed. This coach received \$300 for coaching two hours a day, five days a week, during September, Octo-

[Continued on page 38]

## Cross-Country Suggestion

In the past, many errors have been made at the finish of cross-country races in recording the relative positions of the men as they cross the tape. When the men finishing have come in as a rather closely grouped and compact body the head judges have usually experienced a great deal of difficulty in distinguishing the numbers of the individual competitors as they pass the line. I wish to pass on an excellent method of scoring which has been used successfully in the Fox River Valley conference for the last two years. By means of rope stretched between six stakes, as shown on the diagram below, a funnel is constructed which serves to taper the finishing group down to a single line so that they can be easily and quickly dis-



tinguished. The lane formed by stakes D, C, F, and E is approximately three feet in width, while the mouth of the funnel proper is some forty feet wide. The runners finish between stakes A and B and then slow up entering the lane started by stakes C and D. They walk down the lane and at end of the lane (stakes E and F) the head judge releases the men one by one, calling out their numbers, which are recorded by a secretary.

R. E. LINDWALL

## Virtues of Rugby

Rugby is essentially a players' game. It is not tame. It is hard, fast and sporty. It puts a premium on both individual ability and team work. It exacts an understanding of rules and a high standard of players' conduct. It is so open and aboveboard that infractions by contestants are easily observed. A referee and two linesmen suffice to handle any two teams in action.

The best way to introduce such a game would be in the preparatory schools, private and public. With a little teaching and some supervision, the game should carry itself. Once planted, it should thrive. There is enough fun and virile excitement to make it popular with the players.

Rugby is a game at once theatrical but not easily dramatized. It is a sport that is near the equal of hockey or basketball in its demand for continuous action and in its exaction of fine physical condition.



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Style G—A hand turned feather weight football shoe of the finest quality yellow back Kangaroo. Will stand hard usage for a game shoe. Ten eyelets high. Cleats will not punch through sole. If not otherwise ordered will be equipped with No. 4 cleats. School price, \$12.75.



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Style PX—Has a soft toe. Otherwise like P. Ten eyelets high. Equipped with No. 1 cleats. School price, \$6.65. Box toes on Styles G or Z at an extra cost of 50¢ per pair

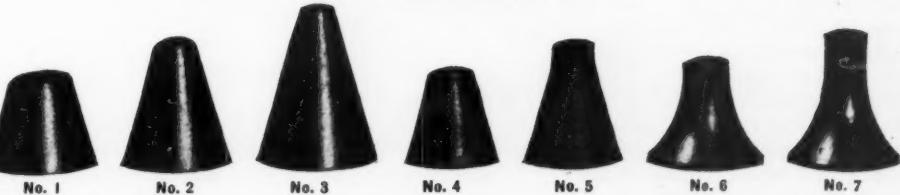


O

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No. 6—Game concave cleat. Same density as No. 4.

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## Soccer

[Continued from page 12]

with a short run to gain momentum at the point of contact, using the same form and position as above.

A modification of the simple stationary ground kick follows whereby the ball is raised from the ground for a short distance still using the instep. This is done by placing the left foot alongside of the ball but slightly to the rear.

The right knee will not be directly over the ball as in the ground kick, and the rise of the ball depends on this distance back of the ball that the left foot is placed. The ball leaves the ground at a tangent to the arc of a circle, the radius of which is the distance from the knee to the foot. (Illustrated in FIG. I.) The farther in back of the ball that the right knee is held the greater the angle of rise from the ground at point of kicking (D to D'). Up to a certain distance the right leg swing from the knee governs the direction of the ball and likewise the speed. As the distance increases beyond the point where the ball may be kicked with the instep, the action is limited to a straight legged swing from the hip, at which time the toes must needs propel the ball. This will be discussed more fully under the TOE KICK.

Some hints regarding squad formation for practical teaching may be mentioned here. The best is the circular formation where the pupils all face the center, and kicks are made to pupils opposite. This formation allows for straight ground-and raised-ball kicking, and is also a good method for side passing, the ball traveling in clockwise direction, entailing a combination of trapping and kicking. Another formation is to face the squads in straight lines, each player having one opposite to whom the kicks are made.

It is at this stage where ability may be tested by counting scores. After the pupils show an adequate aptitude for controlled kicking, a score target may be marked on a wall, or a frame may be attached to the regular soccer goal posts. A central square constitutes the highest possible score, with decreasing counts surrounding. The kicks may be taken from a point directly in front of the target or at an angle, according to the ability of the group. Also the distance of kicks may be increased. This is easily handled by letting each pupil set up his own ball for kicking, and where a wall is used, the rebound eliminates chasing the ball. (FIG. II.)

It is wise to consider teaching for the promotion of ability to kick equally as well with either foot.

Following the stationary and running straight kick comes the directing of the ball to the side. It was formerly taught, and in many cases still is, to kick such a ball with the side of the foot. Here again let us apply the theory of batting the ball



FIG. V

with the hand. It is seemingly ridiculous to say that the side of the hand should be used to bat the ball to one side or the other, and the same applies to the use of the foot. The hand is merely rotated so that the palm faces the direction in which the ball is to be batted, for the primary purpose of getting as much surface contact to bear as is possible. Thus if the kick is to be made toward the side it might be well to turn the foot in that direction so the instep shall be used. Granted, that under some conditions the side of the foot may, and should be used: especially when making a very short pass to the side, but it is readily recognizable that adduction of the leg is hardly advisable when increased speed and distance is required, so it might be well to spend some extra time in teaching a slightly more difficult movement rather than be later forced to educate away from a clumsy beginning.

So far all that has been discussed has had to do with the ball in a stationary position.

Next must come the training for control of a moving ball. This can best be accomplished by assigning someone to the task of rolling the ball to a position where it can be easily trapped or kicked. Trapping is that action whereby the progress of the ball is momentarily halted for the purpose of getting the ball into position for good control.

### Simple foot trap

A simple trap of a rolling ball is best executed with the sole of the foot. For instance, if the ball is to be kicked with the right foot, that foot is the one which stops the ball by holding the leg forward and catching the ball between the sole of the foot and the ground about twenty inches in front of the left foot. The right foot is then brought back and the left placed in the correct position alongside the ball with the right foot ready to make the kick.

Another simple trap is that which stops the ball with the inside of the foot allowing a slight rebound, and this must be immediately followed and the kick made.

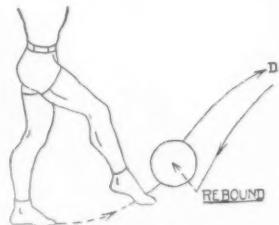


FIG. VI

### Moving ball

To continue with the control of a moving ball, it is best to arrange the groups in ranks facing each other, and the pupils about three feet apart, with a space of about fifteen feet between the ranks. The pupils of one rank then roll the ball to the pupils of the rank facing them, one at a time of course, for the purpose of allowing one side to return the ball by kicking it back to them. The same form as is used in the stationary kick is used here with the added element of timing the ball the major factor to be considered. As before, it depends upon the closeness of the left foot to the ball whether it is raised or not. This method has to do only with the technique of kicking the ball directly to the front. This may be modified by hav-

ing the pupils kick the ball to one side or the other, and finally having the ball rolled from the side and making the kick at right angles to the direction from which the ball was rolled. A ball rolled from the right side should be kicked with the left foot, and vice versa. The reason for this is to apply an opposing force against the force of the ball's direction. Insist on the use of the instep in this kick also. The same methods of testing accuracy of control may be used as were used in the control of a stationary ball.

### The toe kick

In kicking for distance the instep is by far the most accurate kick to be used, although it is somewhat advisable to allow for use of the toe here. As the distance of the kick increases, it is necessary to execute it with the left foot as far to the rear of the ball as possible, and under the circumstances it is quite difficult to reach the ball with the instep.

Much care must be taken in allowing for such a kick, because it is extremely inaccurate considering the importance of surface control on the ball. The toe kick should only be used when the ball is stationary and a long high kick for distance is desired. There is only a limited section of the ball where the toe may be placed in

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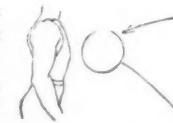


FIG. VII

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order to accomplish successfully the kick, namely, just below the horizontal center and directly in the vertical center. If kicked in the center or above the center, the ball cannot rise, and the result is a grounder. If kicked to one side or the other of the vertical center, the ball will not go straight ahead. This kick can be mastered only after long practice. (FIG. III.)

### Fly balls

Following the completion of work on ground balls, with scoring tests available for each type of kick, we come next to the control of a fly ball or one which has not yet come in contact with the ground and is in motion. First we must consider trapping to insure adequate correct position for kicking. For a fly ball which is near the ground at point of trapping, it is well to use the sole of the foot as in the rolling ground ball, although care must be taken that the ball does not bound too far from the pupil in so doing. Next is that ball which is near the ground but too high for a sole trap. This is a very difficult movement and much depends upon the ability of a pupil to time the flight of the ball accurately. First the pupil must get directly in front of the ball as it is about to bounce. The object then is to cup the ball between the shins and the ground allowing as little rebound as possible. This is done by bending both knees over the ball just as it hits the ground, with the weight of the body supported on the toes, thus affording ample room for the ball to bound into the trap that has been formed. In most cases the ball will bound away from such a trap and stress upon immediately following the ball to insure possession. The kick which follows may be taken with either foot. (FIG. IV.)

### Body trap

Next in line of ball control comes the use of the body in trapping, effective with a ball which is coming in a rather horizontal flight about waist high. In such a case it would be difficult to use the feet in trapping the ball, hence the body forms the cup which arrests the flight of the ball. This is done by bending at the waist so that the ball lands in the hollow thus formed, but at the time the body must break the force of the ball's flight by "riding" with the ball, or bending still more at the moment of contact. (FIG. V.) In the case of a fairly fast moving ball there will naturally be some rebound, necessitating an immediate follow-up to secure possession. When the ball is moving rather slowly, control may be governed so that it will drop to the ground fairly close to the trapper. When the ball is higher up than the waist it must be chested (FIG. VII) unless it is high enough to be headed.

For girls the method of chesting is accomplished by allowing them to fold the arms across the chest, although care must be taken to confine the use of the arms to just such a procedure.

Following the trapping of a fly ball comes the technique of kicking the ball on the fly. This may be approached in a very simple manner by arranging the pupils in

a circular formation and having a tosser stand in the center of the ring to throw the ball to each pupil in turn. As the toss is made the kicker lifts the ball back to the tosser with an instep lift kick just before it bounds on the ground. Fairly accurate tossing is necessary to allow the kicker to maintain a good position for executing the kick. As proficiency increases, the distance of the toss may likewise be increased until it is no longer feasible to cover the distance with a throw. The theory of position and closeness to the ball is to be applied here also, with the added condition that the higher the ball is to rise, the higher it must be from the ground at point of kicking, as the height of the ball's rise depends upon the point in the leg swing at which it is kicked.

With the kicking of a fly ball it is well to teach the drop kick, or that movement whereby the ball is kicked immediately after it comes in contact with the ground. This also depends largely upon accurate timing as the leg swing must be made so that the foot meets the ball exactly as it leaves the ground on its rebound flight. (FIG. VI.)

### Heading

The use of the head in soccer as an organized game is quite essential, as the use of the hands and arms is barred, and the teaching of the use of the head is quite simple as far as fundamental work is concerned. The chief problem is developing confidence in the beginner who is usually afraid that the force of a blow from the ball taken on the head will prove painful. This may be accomplished by starting work with very short tosses or by allowing the pupil to toss the ball for heading himself.

For best results it is wise to illustrate to the pupil that the ball must be headed with that part of the forehead where the skin and hair meet at the hairline. This contact should be made with the eyes open and on the ball. At first, passive heading should be taught in which the ball is merely allowed to bounce off the forehead with no impetus given by bodily movement. If the pupil faces front or the direction from which the ball is to be tossed, this is easily done and after it becomes apparent that the force of the ball will not prove painful, a slight forward motion of the head will serve to introduce the movement of active heading, wherein the force of the ball is enhanced by another force supplied by the pupil. More force can be applied by facing the pupil to one side so that there is a sideward motion of the body with the head turned to the ball allowing for increased power.

Heading for direction and accuracy may be made competitive by scoring as in kicking, as may be heading for distance. Heading to the side is sometimes done with the side of the head, but it is better to have the pupil get into such a position that the forehead is used. Care should be taken that the pupil keep the forehead up well enough so that the ball does not merely scrape off the top of the head. Also there is the danger of heading with the eyes closed and having the ball land on the nose or some other part of the face. By using

[Concluded on page 33]

# LIBRARY

## THE VOTE ON TOBACCO

If one problem has beset coaches more than any other since the beginning of the Era of Supervised Athletics, that problem is tobacco. The post-war popularization of cigarette smoking, brought about largely through advertising, has made the coach's problem none the less annoying.

In the good old days when the "better people" called cigarettes "coffin nails," the coach could merely point out the flat-chested, yellow-fingered cigarette-smoking young men of the pool room and saloon, and remind his players that they too would

of tobacco on athletes. One hundred and two replies were received. They showed that a large majority of the respondents oppose the use of tobacco by athletes.

Unfortunately, the questionnaire did not designate the age of the athlete under consideration. Moreover, the respondents included both college coaches and directors and secondary school coaches and directors. But the fact that the entire group, most of whom were college coaches and directors, voted 79 to 12 in expression of their belief that smoking retards the physical development of a boy and therefore does

QUESTIONS	REPLIES		
	Affirmative	Indefinite or Negative	Unanswered
No. 1 Do you believe that smoking retards the physical development of a boy and therefore does him permanent physical harm?	79	12	11
No. 2 Does smoking in moderation, say, not more than five cigarettes a day, handicap a boy in athletics even if the smoking habit was formed after he was grown or nearly grown?	71	16	15
No. 3 Do you believe that it helps an athlete to any appreciable extent to stop smoking in training season (or seasons) if he is a regular smoker at other times?	87	6	7
No. 4 Has it been your observation that improvement shown by non-smoking athletes was more consistent and greater than that shown by athletes who are smokers?	65	18	19
No. 5 Are athletes who are non-smokers more easy to discipline and therefore better workers than athletes who smoke?	61	17	21
No. 6 As a general proposition have you found the non-smoking athlete a more valuable member of a team than the smoker?	76	14	11
No. 7 Did you smoke when a school boy?	15	79	16
No. 8 Did you smoke when a college student?	45	49	6

go the way of the seared flesh if they did not stay away from cigarettes.

The present-day coach is not so likely to generalize in this manner. He may be just as strongly opposed to the use of tobacco as were his Puritanical forbears, but to justify his position on the question of smoking he must be able to produce scientific testimony to support it. This he can do by reading some of the modern works on the subject. At present there is a difference of opinion among the scientists, making it possible for the coach who is not opposed to the use of tobacco by his players to gain scientific support for his position, too.

For the purpose of observing the present-day attitude of the nation's outstanding coaches on the subject of smoking by athletes, Mr. John Scott Walker, faculty adviser in athletics at the Woodberry Forest School in Virginia, recently sent to 140 coaches and athletic directors a questionnaire seeking their opinions on the effects

him permanent physical harm, indicates that the affirmative vote on this question would have been even larger had the respondents all been coaches of secondary school groups.

The results of the questionnaire are here-with published, through the kindness of Mr. Walker, who comments:

"Letters received and notations made on the questionnaire indicate that some of our best known authorities on athletics have devoted much time to a consideration of the effects of tobacco on the human body. On this subject, too, many books have been written. *Tobaccoism* by J. H. Kellogg, M.D., LL.D., F.A.C.S., superintendent of the Battle Creek Sanitarium, Mich., is violently anti-tobacco, while Dr. W. L. Mencken's book *Tobacco*, in the "Harvard Health Talk" series, will afford smokers considerable comfort. The latest edition of *How To Live*, put out by the Life Extension Institute, has an excellent chapter on the effects of the use of tobacco."

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## Interscholastic

[Continued from Page 18]

worked out according to which the classification was made. This classification was made before the season's schedule commenced, and the boys eligible for the first game remained so for the season (unless of course they violated some of the other rules regarding scholarship, behavior, etc.). The prolonged temptation to train down was thus eliminated since measurements were taken but once during the season.

According to the table of exponents as worked out for the Four-point System, boys were automatically divided into three groups, Classes A, B, and C, according to the sum of the individual's exponents.

This system was employed by schools in the California Interscholastic Federation for some time, but criticism grew to be directed against the inclusion of class in school on the grounds that physical development, not mental progress should be considered. A Three-point System was therefore devised which has been in use in many leagues in the Federation for the past few years. Under this system, 130 exponents is usually the dividing line between the class A and the Class B teams. A boy who exceeds the maximum height or weight permitted for a particular class is automatically relegated to the next larger class regardless of the total number of his exponents.

For fall and winter sports, the classification is made before October 1, and the ages figured up to that date, while for spring athletics the measurements are taken before March 1, with the ages computed as of that date.

In both systems, a pound in weight or an inch in height might make a difference of several exponents. To obviate this condition, a new system is now being tried out in some leagues.

According to this new plan, a point is given for each month in the age, each half-inch in height and each pound in weight. This method results in a much larger set of exponents and the reduction of a pound or two in weight does not make much difference in the total number. Hence it tends to discourage forced reducing on the part of border-line athletes. It will undoubtedly place a boy more exactly in the correct class than either of the other two plans. However, the Three-point System is still in general use, and it will probably be some time before the new plan is widely used.

### New Three-point System

One exponent is given for each month in age, each  $\frac{1}{2}$  inch in height, and each pound in weight.

Class A—475 and above  
Class B—445-474 inclusive  
Class C—415-444 inclusive

Example: Age, 15 years, 2 months (182 months)..... 182 exponents  
Height, 66 inches (132 half inches)..... 132  
Weight, 120 pounds ..... 120

Sum of Exponents 434—Class C

Practice has shown that the only way to prevent boys from training down is to keep the date of measuring a secret. If the date is known, boys will sometimes go to great lengths to qualify for a limited team. Cases have been reported where an athlete reduced more than twenty pounds in order to qualify as a member of the Class B team.

The physical dangers of this reducing are apparent. It does no harm for a boy to take off a few pounds by exercise, but when he starves himself for days before the measuring date and takes a strong physic to aid the process, he is weakening his resistance to disease, and perhaps undermining his health.

To avoid the questions that arise when the boys are weighed by their own coach, it is the custom here to have the measuring done by a coach from another school. This exchange has been productive of better feeling and less criticism. Probably a much better method would be to have one man make the rounds, taking with him his own scales and measuring apparatus and doing the job at all of the schools on the same day. More uniform results would be obtained in this way. Always, the weights are to be taken without clothing, the height without shoes, and fractions of inches and pounds are to be disregarded.

The ages (and class where the Four-point System is used) must always be sent out from the principal's office.

There are many and manifest advantages to the multiple team plan. When a school is represented by three basketball teams, the equipment is enjoyed by a large number of students instead of by a restricted group. Thus the per-pupil cost is greatly reduced. While this sort of economy may not reduce taxes in the immediate future, it will reduce the boy problem in a community, and may effect real savings in avoiding the costs of juvenile delinquency.

Moreover, boys, because of size, are not denied the joys of the game. Many a boy, small for his years, has genuine ability, but he cannot compete successfully with boys larger than himself. Then, too, many a bright youngster graduates from high school while he is still young and small. He has been denied the right to participate (in case there is but one "big" team), while the mentally slow boy who is older, larger, and more mature, has been the star athlete. Under the class system, there is a team for boys of all sizes. They compete against their own kind and derive the benefits of group competition.

From the athletic director's point of view, too, there is much to be said concerning the desirability of several teams. It commends itself to the public who gradually come to see that the game itself is more important than the victory. Public interest instead of centering upon one team, is divided between two or three, and emphasis is placed upon participation, rather than upon victory. There is, accordingly, less demand that the coach produce a winning team or forfeit his job.

The more boys who participate, the larger the number of patrons who are interested. When the taxpayers see for themselves that the investment is a profitable one, they will not object to the expenditure.

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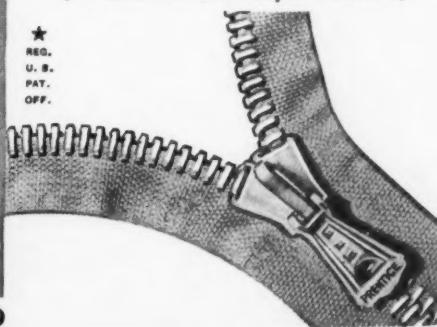
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## Blocks

[Continued from Page 8]

moving to the path of the play, the cross-body block is used. It is principally used by linemen. If a lineman comes out of the line to run in the interference, the opening left by him must be closed by an adjoining team-mate with this block. It is the most frequently used block of a center in a balanced line, who must prevent his opponent from getting to the off tackle plays.

To execute the blocker first steps to the side and forward in the direction the play is going. With this forward foot he drives in low with the side of his body and comes to a position with his hands and feet on the ground. If his opponent should attempt to jump over him, he rises up with his back to prevent it. To prevent his opponent from getting around him he stays in close contact and moves with him. To do this effectively the blocker must develop a sensitivity along the side of his body by which he will diagnose the slightest intention of his opponent.

### Roll block

The roll block is the most effective block to be used by a single man in the open field. It is used by all men in returning punts or kick-offs and in cutting down the secondary ahead of a play. A backfield man must use it when he is assigned to block an end alone.

The blocker must gain a lot of momentum and dive with his body horizontal to his opponent and parallel to the ground. He gets contact as low as possible on the defensive man, taking care only to avoid being jumped over. Simultaneously the blocker must roll towards his opponent and cut his feet out from under him. Under the new rules the offensive man must get contact before he leaves his feet. Some men like to feint a shoulder block and follow through with the roll block. Feinting aids materially in getting the opponent in an advantageous position; the blocker should make the defensive man believe he is to be blocked to the opposite direction.

### Knee block

If an opponent starts to slip away from a cross-body or shoulder block, the knee of the inside leg may be drawn up behind his forward knee and pulled up tight to the body while rolling towards him. This is known as the knee block. It is not effective when used by itself because proper contact can be gained only by following another block which at least momentarily holds the defensive man in an applicable position.

### High low block

The common use of this block is to produce a quick opening in the line. The object of two offensive men is to throw a defensive man off his feet and away from the path of the ball. A common illustration of the principle of this block is the playground stunt of youngsters in which

one boy will sneak behind an unsuspecting victim while another has his attention and pushes him over. The principal difference in football technique is that the defensive man has a view of both opponents and is expecting the block. Therefore the man in the low position must in no way give an indication of his plans but must stride out long with his outside foot as though he were going down the field. He then drives back over the legs of his opponent with the side of his body, making contact behind and below his opponent's knees. The upper man hesitates momentarily to allow the defensive man to attempt to go through the exposed opening left by his team-mate and then uses a straight shoulder block to drive him over the partner. The block is most effective when the men get contact at precisely the same time.

Occasionally this block may be used by two backfield or a backfield man and a lineman working together to take out an opposing end or tackle. However, much practice is needed to get correct timing to produce results. The offensive men should feint as though they were going to get shoulder to shoulder contact, but just before it is made the outside man should quickly make a low long stride and get contact behind the opponent.

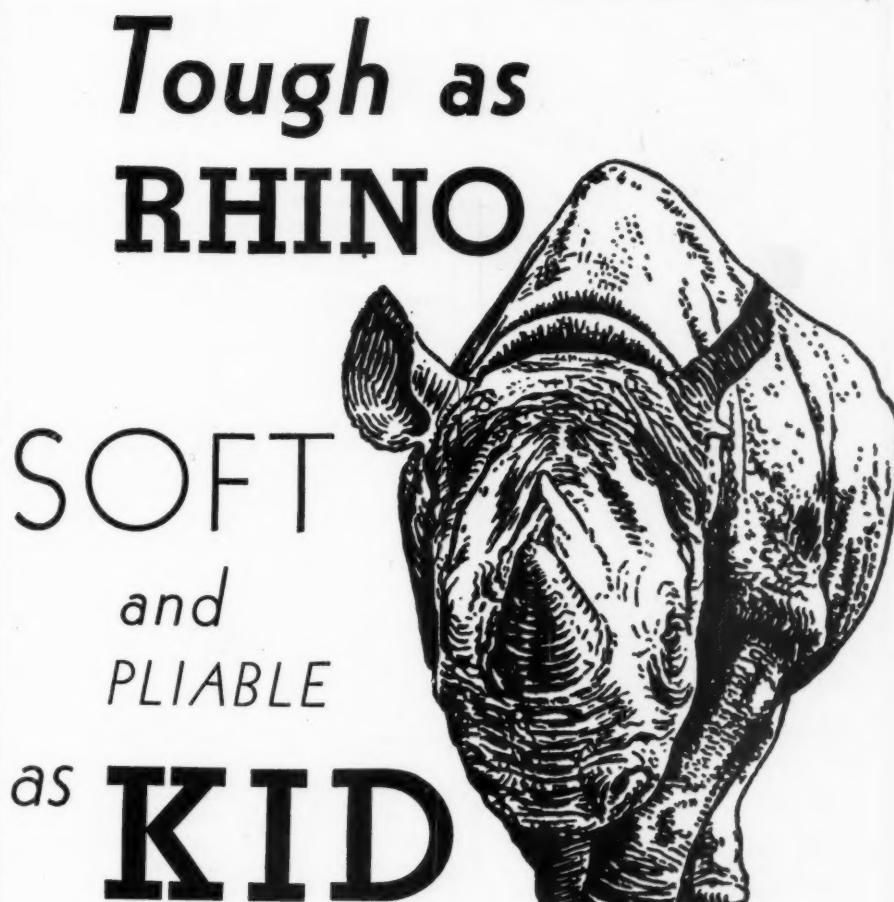
Other blocks than those mentioned above are used by some men, but in most cases they are only slight variations or combinations of these. From these fundamental blocks others might be devised to fit the specific abilities of any particular man. Some men are specialists at one or two blocks and use only those. However, any man will be more effective if he is able to quickly diagnose the circumstances and efficiently apply the best block. If he is not able to use all well, it is better to use a poorer block and get results than to use the wrong one ineffectively.

### The Football Season Opened Aug. 24, East Beating West

In order that the Century of Progress Exposition should not be without its big-time football contest, a game between those vague rivals, East and West, was arranged for Soldier Field, Chicago, Aug. 24, at night. College stars made up the two squads. The East, with three Minnesota players in the starting lineup, two Purdue, one Michigan (who turned out to be worth at least three others), one Northwestern, one Ohio State, one Notre Dame, one Nebraska, and one Tulane. The only player from an Atlantic seaboard institution on the East squad was Summerfelt of the Army. The West had seven Southern California players in its starting lineup; also two from the University of California, one from Washington, one from Gonzaga.

The East won, 13 to 17, due largely to the running and passing of last season's unanimous all-American quarterback, Harry Newman of Michigan; and the punting and plunging of Fullback Horstman of Purdue.

Head coach for the West was Howard Jones; for the East, Dick Hanley. A crowd of 45,000 saw the game.



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## Sugar

[Continued from Page 9]

quasi-psychology. Any thoroughgoing psychologist can show the unreliability of such a judgment.

Several Harvard investigators, under the direction of Dr. W. B. Cannon, experimenting on dogs, found that preliminary injections of glucose in the blood had no effect upon the time of onset of fatigue; and also that there could be an abundance of sugar in the blood (without any preliminary injections) and yet that the dogs showed all the symptoms of fatigue. Dr. Rakestraw found that even after an exhaustion, due to fifteen minutes of stair climbing, there was plenty of sugar in the blood. H. T. Edwards, T. K. Richards and D. B. Dill made observations on Harvard football players. They found that the sugar content of the blood was always a great deal higher than normal (sometimes doubled) even in the second varsity players playing without spectators. This evidently did not depend either upon any special diet or preliminary ingestion of sugars, since second varsity players were not on the special diet and were not given any sugar before the game. The same results were obtained on two high school football teams.

The peak of increase of sugar in the blood was reached at about the middle of the game. Some of these men were tested on the treadmill in the laboratory. They ran about 1.5 miles in 15 minutes and showed a slight decrease in blood sugar percentage. This proves that the increase in blood sugar was due to emotional factors—the excitement of the game, the cheering of the spectators, etc.

Prolonged muscular work associated with poor body conditions may lead to a marked decrease of sugar in the blood. Whereas in those marathon runners that finish blood sugar is either normal or slightly decreased, in men completely exhausted and dropping out, Dr. Best found only half of the normal content (0.05% instead of 0.10%).

Now let us draw some conclusions.

Our muscles contain from  $\frac{1}{2}$  to 1% of glycogen, and if the average weight of muscles is about 40% of the body weight then a man of 70 kilograms (154 pounds) will have from 140 to 280 grams of glycogen. This can furnish enough energy for from 56,916 to 1,138,320 foot-pounds—enough to run 100 yards at the rate of 10 yards per second from six to twelve times, or to walk from 6 to 12 miles at the rate of 2 miles per hour. The muscles normally never exhaust their reserve glycogen, and depend on the constant supply from the liver, via the blood stream. In excitement—according to Dr. Cannon—the adrenal glands are stimulated and produce an excess of adrenin, which enters the blood and causes the liver to discharge more sugar into the blood. The man is then ready for any emergency, is ready to flee or to fight.

Even drinking of cold water may stimulate the adrenal glands, and cause an increase in blood-sugar content.

It is obvious that with this physiological arrangement there is positively no need for ingestion of sugar for competitions of

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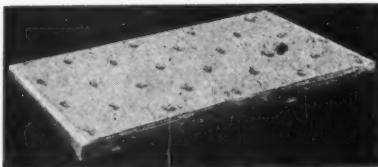
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short duration. Suppose that you have to drive one mile in an ordinary car, and already have ten gallons of gas in the tank; if you add one more gallon, will it do you any good for that mile?

There is no evidence that ingestion of sugar helps in any way, even for such prolonged competitions as football or basketball. There is some evidence that sugar feeding may be useful in very prolonged competitions such as the marathon run, but even that needs more verification.

Dr. T. Bolton claims that sugar (candies) increased the working efficiency of office girls, and that it was especially noticeable on the girls who were trying to reduce. In this case, sugar served as additional food since the girls were on inadequate diet. This deserves special consideration. Some athletes of a very nervous type lose appetite in the morning before the competition and then suddenly begin to feel hungry very close to the time of competition. Some even feel a slight "hunger shaking." Feeding sugar (especially glucose) will quickly relieve these symptoms by giving a sense of satiety.

How about the psychological value of feeding sugar? This is a question that every coach should answer for himself. If he wants to act as a medicine man or witch-doctor, let him administer sugar and also hang a rabbit's foot around the athlete's neck.

Can sugar cause any harm? Excess of it will cause fermentation with gas formation and following loss of efficiency. In concentrated solution even ten lumps of sugar may upset the stomach. Not so long ago, some nationally-known college football coaches used as much as two hundred grams of sugar on the day before the game; they gave it up because of intestinal disorders resulting from it.

The safest and most logical way to obtain sugar available for strenuous work in athletic competition is by the use of a diet rich in carbohydrates.

A table showing the relative merits of well-known food products will be sent to readers on request. Check coupon on page 40.  
—EDITOR

## Soccer

[Concluded from page 26]  
the forehead accurately the force of the ball is somewhat lessened by the cushioned effect of the neck "riding" with the ball. In actual game participation instances are known where the ball has been headed for distances of thirty yards and more with no apparent ill effects. It must be stressed that the neck be held rigid for efficient heading. Interest may be roused by having the squads space off so that each pupil covers an equal territory, keeping count of the number of times that each squad heads the ball without allowing it to touch the ground. An excellent method for heading practice is to have the ball suspended from some overhead source and letting the pupils leave their feet in an attempt to forcefully head it. After each successful attempt the ball may be raised higher from the ground making for increased effort on the part of the pupil to reach it. This is fine training for use in the game when organized on a competitive basis.



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## New Books on the Sportshelf

### Orthopaedic football

THE CONTROL OF FOOTBALL INJURIES. By Marvin Allen Stevens and Winthrop Morgan Phelps. 241 pp. A. S. Barnes & Co. \$3.

THE number of fatalities and serious injuries attributed to football in recent years has reached a figure sufficient to give coaches and all others in authority over football players, an increased awareness of the responsibility which they, as guardians as well as instructors, are shouldering.

Last year the Football Rules Committee effected changes designed to further protect the player without sacrificing, to any appreciable extent, features of the game which contribute to its popularity. The football rules committees\* could not change much more without seriously exposing the game to the loss of some of its major characteristics. It will not be necessary for the rules committees to make further alterations if the game can be continued to be played without unduly risking the lives and limbs of its players. The responsibility for maintaining this safety is passed, for the duration of the playing season, from the Rules Committees to the coaches and officials. To what extent the officials may go in controlling this element of the game the rules make clear. As for the coaches and the trainers they, at last, have an authoritative treatise to which they may turn to guide them in making football still more safe. *The Control of Football Injuries* stands, in the estimation of this reviewer, as the most signal contribution to scientific and safe football that has ever been evolved outside the field of football legislation. In this work, Drs. Stevens and Phelps reproduce the results of their long study of all sports injuries, and football injuries in particular.

At Yale, for the past ten years, Dr. Stevens, as player, coach and surgeon, and Dr. Phelps, as specialist in orthopaedics, have made what they call a hobby of all sport injuries. They have taken every injury, minor and major, that is known to have occurred in a game, and have told, with a minimum of technical terms, the story surrounding it. The Yale games and practices have been the main laboratory for the studies and experiments. A moving picture record of every minute of every game was kept, primarily as an aid to correcting the players for future games. But the pictures proved of double service, for whenever a player was injured, the moving picture record of the particular situation was carefully studied, allowing Drs. Phelps and Stevens to reach conclusions of the utmost value to coaches who would know how to teach blocking, tackling and other skills so as to reduce the liability of injury without sacrificing the effectiveness of the skill.

The authors devote page after page to the reproduction of pertinent scenes from

\*There are two rules committees in football: the National Collegiate A. A. committee, which up until last year had the football legislature all to itself; and, now in its second year, the National High School Federation committee, which makes the rules for the high schools of Illinois, Wisconsin, Iowa and Kansas, and any others that want to use them.

the motion picture record, pointing out in generous captions the type of play involved, what is being attempted, the nature and probable cause of injury if one resulted from the play, and how the injury could have been avoided.

In this way, the authors not only give the story of football injuries and how to prevent and treat them, but also instruction in the best methods to use in executing the fundamentals of the game. When a coach is given a choice between executing a fundamental the more dangerous way and the less dangerous way—where it is shown that by both ways the desired objective can be reached—it is only the irresponsible coach who will remain indifferent to the method he teaches.

The book stands alone in all the field of football literature for the unique service it renders the game. All sponsors and patrons of the sport become grateful indeed to the Yale doctors for giving them this modern guide to scientific football.

JACK LIPPETT

### Universal football

SOCER FOR HIGH SCHOOLS. By John Edgar Caswell. 96 pp. A. S. Barnes & Co. \$2.

THE game Americans call soccer is the only football that is played the world over. Boys who play soccer are participating in the one genuinely international football game, and they would find themselves as much at home on the fields of Europe and Asia as they do in Albany and Milwaukee.

The international nature of the game, while interesting to observe, is unlikely ever to be a factor in winning the attention of the average American boy from his native game of football. When soccer wins a new convert (and it has won tens of thousands of them) it is on its merits as the kind of a game boys like to play, however much they may dislike being a spectator to it. Soccer has speed, continuous action, fine skills, teamwork and relative safety. It is this last feature which commends it to supervisors of school play, especially where it is desirable to have an outdoor game that can be played by the comparatively unpracticed and unskilled.

If soccer had a few more thousand enthusiastic coaches like John Edgar Caswell it would soon be commanding the attention it deserves, even in a country that already is devoted to its own spectacular evolution of football. In his book, *Soccer for High Schools*, Mr. Caswell has not committed himself to prophesying the future of the game. He undoubtedly believes, with Professor Jay Nash, whose letter on this point appears in the book, that soccer will never replace American football, but that it can accomplish a worthy end by attracting youth who cannot properly be accommodated in football.

Mr. Caswell's book, as a practical guide to the teaching of soccer skills and strategy, is a thoroughly reliable text, addressed to the high school coach and instructor. It is adequately illustrated with photographs showing young players executing the important fundamentals, and with diagrams

for group practise of the fundamentals and for effective formations under specific game conditions. The book would be especially valuable in the hands of the instructor-of-all-sports whose practical knowledge of soccer may be so little as to be embarrassing.

J.L.

### No student untouched

**INTRAMURAL ACTIVITIES.** By Robert Edward Lindwall. 88 pp. \$1. Published by the author.

**G**ROW as fast as they can, intramural theory, practise and program in the junior and senior high schools, cannot keep up to that expert from Manitowoc, Mr. R. E. Lindwall, who not only has his finger on the pulse of his own local program at Lincoln High School, but seems to have it on whatever is going on intramurally anywhere. Give him credit. Mr. Lindwall has made himself known by dint of hard work and sound theory which he has seen work in practise under his own direction. His book *Intramural Activities—Their Organization and Administration in the Junior and Senior High School*, is an orderly presentation of that program for getting everybody into the game, and "eradicating the past serious disease of 'spectatoritis.'"

It seems that Mr. Lindwall is confirmed in the theory that a successful intramural director ought to be about as good a promoter as he is a physical educator. He ought to be able to put his program over with the boys and girls, and to sell it to the papas and mammas at home. If, in order to do this, he has to make speeches before the Lions' Club and eat Rotary luncheons, that is all part of the day's work.

One of the features of Mr. Lindwall's book is a chapter on practical program set-ups, showing just what is done in several selected schools. The book treats of all aspects of organization and administration, and, as far as this reviewer can see, offers the latest practical word on that subject which is in the foreground of every modern school administrator's thoughts, whether or not it has yet penetrated to his gymnasium and his playfield.

J.L.

### Other new books received

[To be reviewed later]

**SAFETY IN PHYSICAL EDUCATION IN SECONDARY SCHOOLS.** By Frank S. Lloyd. 167 pp. \$1. National Bureau of Casualty and Surety Underwriters.

**N.C.A.A. OFFICIAL INTERCOLLEGIATE FOOTBALL GUIDE FOR 1933.** Edited by Walter R. Okeson. 258 pp. and detachable section of rules. 35 cents. American Sports Publishing Co.

**OFFICIAL INTERSCHOLASTIC FOOTBALL RULES for 1933.** Edited by H. L. Ray and H. V. Porter. 101 pp. National Federation of State High School Athletic Associations. 20 cents.

**FOOTBALL PLAY SITUATIONS.** Compiled by H. L. Ray. 63 pp. National Federation of State High School Athletic Associations. 30 cents.

**GAMES AND GAME LEADERSHIP.** By Charles F. Smith. 658 pp. Dodd, Mead & Co.

**HEALTH WORK AND PHYSICAL EDUCATION.** National Survey of Secondary Education. Bulletin No. 17, Monograph No. 28. 97 pp. 10 cents. United States Government Printing Office.

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By Robert Edward Lindwall

B.S. Northwestern University (formerly assistant in the Department of Intramurals, Northwestern University)

M.S. University of Wisconsin

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*Intramural Activities*, by R. E. Lindwall, \$1.

*Winning Basketball*, by Nat Holman, \$2.

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## Five Plays



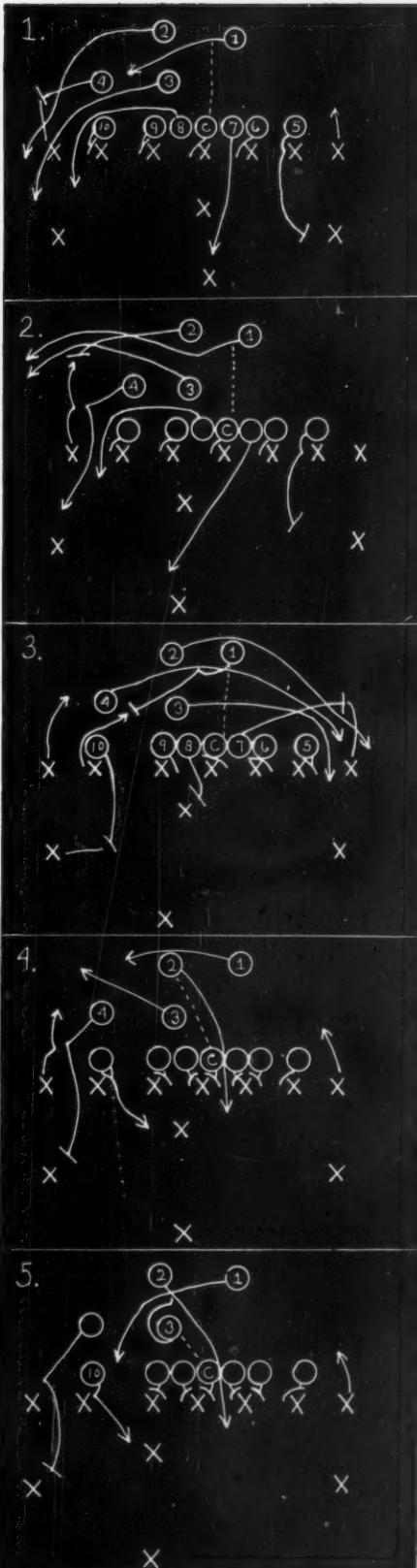
To the right are diagrammed five proven plays against a diamond secondary defense, from the Notre Dame formation. This sequence consists of a power play off tackle, a wide end run, a reverse, a straight buck, and a delayed buck. The details:

**No. 1: Off-tackle slant**—Right end No. 10 blocks the defensive left tackle in. Right tackle No. 9 blocks the defensive left guard in. Right guard No. 8 comes out of the line and leads the interference. Center blocks center. Left guard No. 7 goes through for the safety man. Left tackle No. 6 blocks the defensive right guard. Left end No. 5 shoulders the defensive right tackle and then goes through to get the defensive right halfback. Right half No. 4 blocks the defensive left end out. Quarterback No. 3 teams with No. 8 in interference. Fullback No. 2 starts wide and then cuts inside the defensive left end. Halfback No. 1 receives the ball direct from center, and slants off tackle.

**No. 2: Wide end run**—The line blocking is identical with that of the off-tackle slant. Right halfback No. 4 feints at the defensive left end and then goes through to get the defensive left halfback. Quarterback No. 3 comes around deep as the main interferer for left halfback No. 1, who receives the ball direct from center, and, after faking an off-tackle slant, cuts back wide around end. Fullback No. 2 blocks the defensive left end in.

**No. 3: Reverse**—Left end No. 5 blocks the defensive tackle in. Left guard No. 6 blocks the defensive right guard in. Left guard No. 7 comes out of the line and blocks the defensive right end out. Center blocks center. Right guard No. 8 goes through to get the fullback. Right tackle No. 9 blocks the defensive left guard. Right end No. 10 goes through to get the defensive left halfback. The quarterback, No. 3, leads the interference off tackle. Left halfback No. 1 receives the ball and fakes to fullback No. 2 sweeping around behind, but gives the ball to left halfback No. 4.

**No. 4: Buck**—The line blocking is all straight ahead as indicated, two pairs of linemen working on the defensive right guard and the center, the heart of the objective. Right end No. 10 shoulders the defensive left tackle, and then goes through to get the fullback. Right halfback No. 4 makes a feint at the defensive left end and then goes through to get the defensive left halfback. Quarterback No. 3 and left halfback No. 1 fake a wide end run, the ball going from center direct to fullback No. 2.



**No. 5: Delayed buck**—The line blocking is the same as for the straight buck—all straight ahead line blocking, with the right end, No. 10, shouldering the defensive left tackle and going through to get the fullback. Quarterback No. 3 takes a step into the center and receives the ball direct. He then pivots, faking to give the ball to left halfback No. 1, but giving it to fullback No. 2, who has delayed momentarily.

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## The Government Survey of Athletics

[Continued from page 22]

ber, and November. He had no other connection with the school. The principal in this school reported that after practice hours in the evening and even after games played away from school the coach would not accompany the boys back to the building to take care of injuries and supervise conduct. In this school the coaching of other sports was done by regular faculty members who received no extra pay for the work. In addition to handling their own sports they were called upon to take care of members of the football squad at the building when they had been released by the specially employed coach. Consequently, a feeling of unfairness had arisen among the coaches who were members of the faculty. All the funds for athletics granted to this school by the board of education were used to pay the salary of this special football coach. The persons on the faculty who were trying to develop an intramural sports program, and those who were attempting to make interscholastic athletics educational, felt that, in this case, the board of education was paying its money to a person whose point of view was anything but educational.

In a high school in the State of New York, in spite of an excellent city-wide program of physical education and athletics, there is still a demand that a nationally famous football player shall coach the football team. At the time this school was visited by the investigator the coach received a salary of \$450 for the football season. His only connection with the school was through its football team. Frequently he went to games played at his alma mater, being absent for days from his own coaching duties. All other coaches in that high school are members of the physical-education staff.

While visiting a high school in Virginia the investigator was told by the principal that the school had formerly followed the practice of securing its coaches from among star athletes in the city. These coaches had no connection with the school and had no concern for school interests. A change of policy occurred. At present all interscholastic teams are coached by a high-school instructor, who was at one time a college athlete. The principal emphasized the fact that now the coaching is better, many more boys turn out for the squads, better teams have been developed, and the community is much better satisfied.

The improvement of conditions in the schools generally, when the plan of employing nonfaculty coaches is supplanted by the plan of requiring all coaches to be members of the faculty, and the dissatisfaction (more often than not) with the nonfaculty coach, will no doubt make more and more rare the cases in which schools entrust the athletic instruction of their pupils to persons not connected with the school.

### Alumni and School Athletics

As far as is revealed by this study, the policies and management of interscholastic athletics in secondary schools are in no way interfered with by the alumni. Only one instance was found during visitation in which a slight feeling of resentment had developed, and that on the part of only one alumnus and not of a group. In this case an alumnus who was formerly an athlete, and had become a hang-over in the community, wished to be appointed an assistant coach in the school. His request was not granted.

In a few schools the alumni are represented officially in the athletic organization in the school, serving as committee members or councilors. This usually comes about, however, through the courtesy of the administrators of the school, but (for this study) in no case had the policies and management of athletics in the schools been determined by alumni influence. In general it may be said that among secondary schools the relationship of alumni to school athletics presents no serious problem.

### The press and interscholastic athletics

Secondary-school authorities in general are much more concerned about the relationship of the press to interscholastic athletics than about the relationship of the alumni to the athletic program of the school. The effect of much publicity on the poise and general character of young athletes is often harmful. The fact that sports reporters are in no way connected with the school makes the situation more difficult. Often these reporters do not have the educational viewpoint, and consider primarily the appeal of their stories to the general public, rather than the effect of their articles on the athletes themselves. Thus, in many cases, coaches and principals are confronted with the task of preventing their players from becoming publicity-conscious.

Of course, much publicity tends to increase attendance at games. Consequently, some coaches and administrators endure publicity that endangers the self-composure of players, rather than imperil gate receipts by protesting to reporters. Such a case was encountered in a visit to a high school in the midwest. The coach admitted that the acclaim given players in the local newspapers was too much for the good of the boys. However, he was aware that publicity attracted crowds to the games. Consequently, in his talks with the reporter he requested that stories of games be tempered, so long as the attendance at games did not suffer. It is the conviction of many persons that it is an inexcusable error to

*Number of schools reporting certain problems pertaining to interscholastic athletics as formerly but not now troublesome, troublesome at present, and as never having been troublesome under the present administrative régime.*

Problem	Has been but is no longer trou- blesome	Is at present trou- blesome	Has never (under present régime) been trou- blesome	1		
				2	3	4
1. Arrangements for athletic contests placed too much upon a commercial basis	12	33	147			
2. Tendency of the community to interfere in the administration of interscholastic athletics	35	43	142			
3. Tendency of the community to rate the success of the school in terms of athletic success	24	101	115			
4. Relation of the administration to the coach	15	24	146			
5. Salary of coach as compared to that of other staff members	11	36	137			
6. Detraction from school work	33	78	117			
7. Encroachment upon school time	33	61	121			
8. Eligibility of participants	59	82	106			
9. Too few pupils derive benefit	22	160	64			
10. Questionable moral values resulting from too strong a desire to win	17	47	129			
11. Pupil transportation, and the conduct of pupils on trips	40	83	117			
12. Conduct of pupils during and after contests	30	32	144			
13. Conduct of spectators during contests	30	89	109			
14. Falling off in scholarship among contestants	14	56	125			
15. Physical hazards to contestants	16	65	108			
16. Tendency to copy colleges in kinds of sport engaged in and in manner of conducting them	9	38	125			
17. Tendency among athletic coaches to direct outstanding athletes to their alma mater institutions	.....	31	137			
18. Inducements to high-school athletes offered by private individuals, alumni, business men, or other persons interested in certain higher institutions	8	44	98			
19. Tendency of athletics to bring into prominence in school life undesirable boys (for class offices, etc.)	.....	1	1			
20. Tendency toward distorted standards, due largely to newspaper publicity	.....	2	.....			
21. Keeping up of morale with a losing team	.....	1	.....			
22. Crowding out of other activities	.....	1	.....			
23. Difficulty in getting competent officials	.....	2	.....			
24. Securing proper carry-over value for competitive athletics	.....	1	.....			
25. Difficulty of raising money properly to equip teams and maintain facilities	.....	1	.....			
26. Too much time taken from intramural program which benefits the many. Physical education teachers put too much emphasis and time on coaching athletic teams	.....	1	.....			
27. Subterfuge in observing rules of eligibility	.....	1	.....			
28. Neglect of school work by coach	.....	1	.....			

endanger the poise and character of young people for the sake of a burdened turnstile.

### Problems

One of the most interesting parts of this investigation has to do with the problems concerning athletics which are at present troublesome to the schools, have been and are no longer troublesome, and have never (under the present administrative régime) caused special concern to the persons responsible for the program of interscholastic athletics. In order to make this inquiry less burdensome to the respondents and more meaningful to this

study, a rather complete list of 18 problems was suggested in the inquiry form. Space was provided in which respondents were requested to write in any additional problems which were not included in the list and which were troublesome to the local school. Ten additional problems were thus added by the respondents. In filling in this section of the inquiry form three types of checking were possible, namely, to indicate whether a problem has been troublesome but is no longer so, was troublesome at the time of inquiry, and never had been (under the present administrative régime) troublesome to the school. The results of this inquiry are summarized in the accompanying table.

### THE USES OF ADHESIVE TAPE

An interesting and practical method of marking indoor courts with temporary lines has been developed and used with success by Stuart McCutcheon, athletic director of the Victor F. Lawson Y. M. C. A., Chicago. It is by laying strips of adhesive tape and then shellacking them.

A feature of this method is that the laying out of the courts can be done very quickly and the lines on the floor can be removed without leaving any trace of the marking. Mr. McCutcheon says:

"Before laying the tape we swabbed the floor along the court lines with gasoline and let it dry thoroughly. In laying the tape we started from a corner and fastened one end of the strip firmly for about 12". The edge at the other end was held along the mark about 2" above the floor and the strip stretched tightly in this position. Starting from the fastened end it was then pressed against the floor by hand or with an ordinary rolling pin and rolled hard a few times, after which it was given a coat of clear shellac."

## Announcing THE NATIONAL SCHOLASTIC GOLF TOURNAMENT Sept. 11 to Oct. 20

Encourage your students to enter. The tournament is open to both boys and girls. Only high school students in good standing are eligible. See rules below.

SCHOLASTIC, the national high school weekly, is conducting this tournament as a boon to high school golf. There is no entry fee, or obligations of any sort attached to it.

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### THE RULES

1. Any regularly enrolled high school student in the 9th, 10th, 11th or 12th grade, boy or girl, whose eligibility to participate in sports has been passed upon by his or her high school principal, athletic or physical director, may compete in the National Scholastic Golf Tournament.

2. Players will compete against the par of the course on which they are shooting. A player's final ranking in the tournament will be determined by the relation of his or her score to the par of the course.

3. Each player must be accompanied over the course by at least one other person, who also may be shooting a tournament round or he may merely be a non-playing witness. The score card must bear this second person's signature, attesting to the authenticity of the score. The rules of the United States Golf Association shall govern the play.

4. Matches must be played between Sept. 11 and Oct. 20, 1933, inclusive. The high school athletic director or physical director must approve, in advance, the exact date for the player's tournament round of 18 holes. The 18 holes must be played successively; that is, there must be no rest period or break during the round, and if a 9-hole course is used, the 10th tee shot must follow directly after holing out No. 9.

5. Players shall use the official score card of the course where the round is played. In addition to the signature of the witness on the card, the card must bear the signature of the school athletic director or physical director testifying that to the best of his knowledge and belief, the round was played according to these rules. The score card should then be sent at once to Scholastic Sports Dept., 135 East 44th street, New York, N. Y. The full name and initials of the player, with the name and address of his or her high school, must be clearly written or printed on the card, in order to avoid misspelling of names when the results are tabulated.

6. Matches may be played on any course where the total distance for 18 holes is at least 6,000 yards.

7. Prizes, Boys' Division: For the best score in the United States, a bronze plaque, to become the property of the player's school. The plaque will bear the name and achievement of the winning player. A silver trophy, suitably inscribed, will be awarded the winning player, for his own possession. For the next nine best scores, players will receive suitable silver trophies. In the event of a tie for first place, Scholastic will arrange a play-off of 18 holes. In event that ties for the next nine places involve more than nine players, Scholastic will arrange play-offs.

Girls' Division: The same plan of prizes will be awarded in the Girls' Division as in the Boys'.

## Carry-Over Values

"**I** WAS a substitute right halfback on the Masten Park High School football team in Buffalo, and I spent most of the season warming the bench. The only place we had to practise was on a lot behind Lang's brewery, and the ever-present odor of sour mash is the most vivid recollection of my football career. Now I never see a football game without thinking that I am smelling mash."—REXFORD GUY TUGWELL, Assistant Secretary of Agriculture.

"**T**HE teaching of a game is a technical subject, and can be only adequately handled by those trained for it."—NOEL CURTIS-BENNETT, England; Honorary Treasurer of the National Playing Fields Association.

"**T**(play days) is a movement that should help break down the feeling of antagonism between schools where such has been built up around boys' athletics."—ELLEN MOSBEK,

formerly manager of the Illinois League of High School Girls' Athletic Associations.

"**N** moderation beer won't hurt anybody. Naturally there is a limit to all things, and beer drinking, like swinging Indian clubs, might easily be carried too far. But that's not worrying me. I have been coaching long enough to realize that men who are genuinely interested in athletics will keep themselves fit. Moreover, I've been coaching long enough to know that hard and fast rules on training aren't worth the paper they're written on."—H. O. CRISLER, Princeton football and basketball coach.

"**T**HE satisfactions of coöperation will gradually displace the motivations of competition, and the whole artificial machinery of marks and promotions which leaves the many with a sense of half-failure and decreased intellectual energy, will gradually disappear."—DR. HENRY SUZALLO, president of the Carnegie Foundation for the Advancement of Teaching.

"**B**ELOW BELIEVE it is not advisable to burden the quarterback with additional rules for their first practice games. It is better to give him the basic plays and explain to him how these may best be used. Some coaches throw their entire offense at their team in the first week or two of the season and expect them to learn by experience what plays work best and where. I much prefer giving them our several basic plays and a check play or two on these plays. Then we send our quarterback and his team into the first scrimmage with this limited attack, thus, giving the quarterback his opportunity to run the team in these scrimmages applying the fundamental rules without coaching aid or interference. We allow them to handle the team on their own."—R. E. HANLEY, Northwestern football coach.

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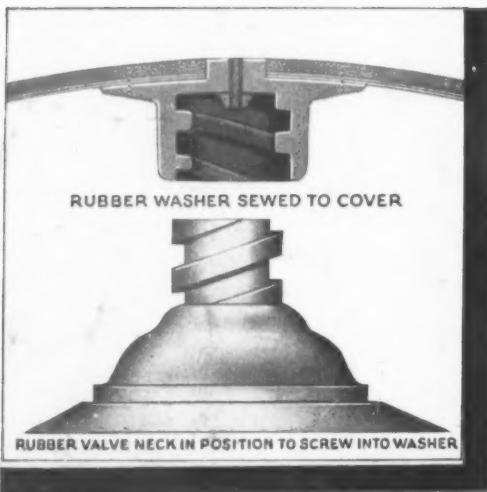
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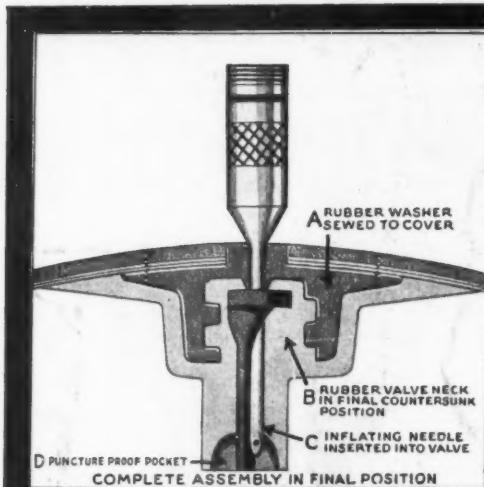
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